Motivational Perspectives in Work-Based Learning: A Micro Model

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This thesis develops a micro-model of employee perspectives in the Work-Based Learning (WBL)-motivation process. WBL plays a vital part in promoting employer/employee adaptability in today's dynamic climate. Individual motivation is central to successful WBL, underpinning individual learning, upon which organisational learning is founded. There were three key stages in model construction.

Stage one constructed an initial WBL-motivation model through exploration of employer and employee perspectives of WBL; utilising six focus groups with employees (n=34) and semi-structured interviews with employer representatives (senior training managers, n=3). Participants were drawn from three large financial organisations.

Stage two further developed and refined model factors, focusing on the employee perspective. A research-specific motivation questionnaire was developed to assess model factors, items being based on stage one participant accounts. Following questionnaire completion by cohort one (n=100, full-time employees from a range of organisations), factors were refined using Principal Components Analysis and the questionnaire modified accordingly; following questionnaire completion by cohort two (n=98, from two SMEs), factors were confirmed using Alpha Factor Analysis and used to modify the model.

Stage three identified significant factors and tested the inter-factor relationships in the WBL-motivation model by entering composite scores from the research-specific questionnaire into Hierarchical Multiple Regression Analysis (participants n=96, from two SMEs). A micro-model of employee perspectives in the WBL-motivation process was produced representing salient motivational factors (valued outcomes, instrumentality, perceptions of the organisation, goal setting, goal acceptance and satisfaction) and emphasising the complexity of inter-factor relationships.

This model represents the major contribution of this thesis to current theory and practice: furthering theoretical understanding of employee motivation in WBL, and raising employer/employee awareness of salient issues, which can be used to inform WBL practice and development. This study contributes to methodology through construction of a questionnaire for WBL-motivation evaluation suitable for researchers and practitioners. Suggestions for future model development are discussed.
DECLARATION

I declare that this work has not been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

I further declare that this thesis is the result of my own investigation, except where otherwise stated (a bibliography is appended).

Finally I give consent for my thesis, if accepted, to be made available for photocopying and for interlibrary loan and for the title and abstract to be made available to outside organisations.

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CHAPTER 1

LIFELONG AND WORK-BASED LEARNING
Lifelong and Work-Based Learning

This thesis explores employee motivational perspectives that underpin the Work-Based Learning (WBL) process. WBL plays a vital role in promoting both employer and employee adaptability in today's dynamic organisational climate. It has been argued that motivation is a key element in workplace learning, both in terms of promoting participation in learning and as a pre-requisite for effective learning outcomes (McCombs 1991, Tannenbaum et al 1991). Despite the recognition of the importance of motivation in WBL, there is little research on the factors underpinning the motivation-WBL process. Thus, in order to further understanding of this key issue, this thesis constructs a micro model of employee perspectives in the WBL-motivation process. The aim of model construction is to provide a comprehensive representation of salient factors within the WBL-motivation process and, most importantly, explore the nature of inter-factor relationships. It is also important to note that whilst model development was initially based upon existing theory, participant perspectives of WBL were the main driving force behind model specification. The model not only contributes to theory through increasing understanding of salient issues and the dynamics within the WBL-motivation process but also contributes to practice; the model can heighten employer and employee awareness of important motivational issues in WBL, which can be used to inform the development of WBL.

This chapter serves as an introduction to the project and has four principle aims. Firstly, to set the research within its wider context of Lifelong Learning (LLL), secondly, to explore the importance of motivation in WBL, thirdly, to present the aims and objectives of this thesis, and, fourthly, to provide an outline of thesis structure.

1.1 THE LEARNING SOCIETY AND LIFELONG LEARNING

This thesis is set within the wider context of the promotion of a learning society, a high priority throughout Europe, demanding a society made up of individuals with the ability to adapt to change, rejuvenate existing skills and the labour market as a whole, in essence a dynamic
forward-thinking society. Learning society development is based on the philosophy of lifelong learning (LLL), which has been defined as:

\[
\text{a process of learning that continues throughout one's lifetime depending on individual needs, interests and learning skills}
\]

(Livneh and Livneh 1988, p. 638)

Thus LLL advocates that development does not stop when one leaves school or college but has the potential to continue throughout life through the exploitation of a diverse range of developmental opportunities.

The importance of this issue today is reflected in the establishment of 1996 as the European Year of Lifelong Learning and the release of a large number of policy papers, for example, nationally focused papers such as 'Lifetime Learning - A Consultation Document' (UK Government 1996) and 'The Learning Age' (DfEE 1998a), and Wales-specific papers such as 'People and Prosperity' (Welsh Office 1995) and 'The Education and Training Action Plan for Wales' (ETAG 1999). Within these papers, developmental activities are seen as a resource that will help promote the development of a learning society, providing the individual with the opportunity for self-awareness, achievement and self-fulfilment in all aspects of their life. The work place is recognised as lying at the heart of the promotion of LLL as it is within this context that the greatest part of adult development takes place (UK Government 1996), and where, most importantly, the application of and use of new learning takes place. Investment in people is seen as the key issue in promoting long term prosperity and competitiveness in industry, in particular both the national and Wales-specific policy papers support the achievement by employers of the Investors in People (IIP) National Standard as a way forward for LLL in the workplace. Furthermore, developmental opportunities are seen as essential to promote social integration through sharing common values, the passing of cultural heritage and the teaching of self-reliance.

The focus on the promotion of a learning society and the importance of LLL has impacted greatly on the education system in the United Kingdom. There is an emphasis on providing more vocationally-relevant courses and a more student-centred approach. The importance of credit-based systems that increasingly recognise and accredit formal and informal learning achieved, not only in educational establishments but also in the workplace, the community and the home are
emphasised. This has led to the redesigning of educational delivery systems and the exploitation of educational technology in support of learning. Indeed, education establishments have tried to address these increasing demands through the delivery of education using different modes, for example open and distance learning (ODL) courses, and development of vocational courses in partnership with employers, for example work-based learning courses (National Committee of Inquiry into HE 1997). In parallel, employers must recognise the importance of implementing employee development programmes in the workplace and individuals are under increasing pressure within the present climate to take responsibility for their own learning and lifelong career planning (Employee Development Bulletin 1996). Furthermore, a number of initiatives in support of LLL have been developed. These include the Investors in People (iIP) National Standard, the University for Industry (UfI), Individual Learning Accounts (ILAs), Career Development Loans (CDLs), Vocational Tax Relief (VTR) and Employee Development and Assistance Programmes (EDAPs) - (Employee Development Bulletin 1996, DfEE 1998a, DfEE 1998b). In addition, there has been a surge in the amount of research focusing on adult education investigating why individuals choose to return to post-compulsory education. Growth in this area has been proportional to the growing interest in and importance of promoting a learning society.

1.2 WORK-BASED LEARNING

A major implication of the learning society is the need for developmental opportunities to respond to the needs of industry and the individual. LLL provides a positive boost towards addressing this need (Jarratt and Coates 1995), and may provide the key to coping with and adapting to current changes in the employment market and technological innovations (McCombs 1991, Tannenbaum et al 1991, DfEE 1998a). The current thesis focuses on an important aspect of LLL - Work-Based Learning (WBL), where developmental activities in the workplace are viewed as essential to promote a more highly-skilled, flexible workforce, dynamic, effective organisations and economic stability (Paxton 1976, CBI 1989, Green and Owen 1992, Kemp and Seagraves 1995). Thus, WBL plays a key role in organisational and employee survival and growth in the current rapidly changing industrial environment, which demands that organisations and employees must be flexible and responsive (Jarratt and Coates 1995, Pedler et al 1997).
Chapter 1 - Lifelong and Work-Based Learning

The dynamics of WBL demand a redefinition of approaches to development at work. This was recognised as early as 1976 by Paxton (1976), who highlighted that the 'fix-up and repair' reactive approach was outdated and did not effectively meet employee development needs. A change was needed as traditional definitions of learning in the workplace centred on formal training. The concept of Work-Based Learning, a term that originated in the USA, is a significant step towards redefining developmental activities in the workplace to include a wide variety of learning opportunities ranging from very formal to very informal opportunities, and has been defined as:

learning linked to the requirements of people's jobs. .... the activities which occur under the banner of work-based learning are many and varied. .....(conceptualised).... as (a) learning for work (b) learning at work and (c)learning through work.

(Seagraves et al 1996, p6)

More specifically as:

on-the-job learning and its applications to work-related problems. It might be specific workstation training or general-education curriculums designed to improve knowledge and skills. It encompasses many of today's pop terms - such as crosstraining, retraining, continuous improvement, employee empowerment and trouble shooting. Work-based learning calls for a perpetual learning process and is seen ... as the central element to integrated quality systems.

(Bottoms 1993, p58)

WBL, therefore, is diverse, emphasising that learning is more varied and spontaneous than the traditional view of formal teacher-student relationships. Therefore, there is a need to broaden the definition of developmental activities to not only focus on traditional 'formal training' but also to incorporate informal learning opportunities in the workplace including, for example, mentoring, job swaps, ODL and experiential learning (Darkenwald and Merriam 1982, Brown and Duguid 1991, Courtney 1992). Furthermore, Brown and Duguid (1991) stress the importance of learning in context, particularly informal WBL, where it is important to prevent separation of learning from the meaningful context of work and the 'fluid evolution' of learning through practice should be promoted. They stress that:
workplace learning is best understood ... in terms of the communities being formed or joined. The central issue in learning is becoming a practitioner not learning about practice. This approach draws attention away from abstract knowledge and cranial processes and situates it in the practices and communities in which knowledge takes on significance.

(Brown and Duguid 1991, p.12)

The diversity of WBL is a key factor in the success of learning at work, where more restrictive formal learning methods may act as barriers, and organisations should promote new learning technologies and improve access to learning to facilitate progression, eroding temporal and geographical constraints (Paxton 1976, Jarratt and Coates 1995). Indeed, LLL demands a change in developmental philosophy throughout the whole organisation from top management downwards. The organisation should be viewed as a facilitator of development not a 'determinant', responsibility for learning should be placed squarely on employee shoulders, leaving behind the old 'bureaucratic command and control model' of organisations (Paxton 1976, Pedler et al 1997). The demand for WBL should prevail throughout the organisation from top-level management downwards (DfEE 1998a).

1.2.1 LEARNING ORGANISATIONS

The emphasis on continually updating job-related skills and knowledge (Bottoms 1993, DfEE 1998a) drives the move towards the creation of Learning Organisations that strive for continuous improvement (Arkin 1993, Bottoms 1993, Pedler et al 1997). Central to this movement is the encouragement of employees to develop transferable skills as a survival and developmental strategy and a trend towards empowering employees through increased consultation with employers and formation of Personal Development Plans (PDPs) - (Employee Development Bulletin 1996). Amongst employers there is an increasing recognition of the importance of WBL as a means of fighting obsolescence (Livneh and Livneh 1988, McCombs 1991, Tannenbaum et al 1991). Sloman (1993) and Maurer and Tarulli (1994) suggest that learning and development issues have moved up organisational agendas because of the impact that WBL may have on competitiveness. Indeed, existing studies of WBL have demonstrated both benefits and costs to the organisation and individual (Department of Employment 1992, Payne 1993, Thorpe 1993, Work-Based Learning Network 1996). Employers have benefited from the direct relevance of
WBL to the work in the organisation and the focus on the practical application of knowledge to real
problems; WBL can enhance and be an integral part of the organisation's employee development
plan. However, there are inevitable costs to the organisation, not least potential financial burdens.
The individual employee can benefit both in terms of personal development and by gaining
knowledge with direct relevance to work, enhancing work performance and promotion prospects.
Costs incurred by the employee may be financial or through time constraints placed on them
through their workload.

However, it is acknowledged that this pattern towards developing learning organisations may be
less apparent in small organisations, which face resource challenges for developing employees
(Joyce et al 1995). It is recognised that most developmental activity in Small and Medium-sized
Enterprises (SMEs) is informal (Curran et al 1996). However, informal WBL opportunities are just
as valuable in developing employees and promoting learning organisations as formal
opportunities. Promoting WBL in organisations that face resourcing issues may focus on making
explicit the benefits of these informal opportunities so that they can be exploited to their fullest
extent. Furthermore, it has also been recognised that whilst the vast majority of employers do
promote developmental opportunities for employees, support to take these opportunities is often
unevenly spread and variable in quality regardless of the size of organisation (DfEE 1998a).
However, not only employees and employers, but also National Training Organisations (NTOs),
Training and Enterprise Councils (TECs), and Further and Higher Education Establishments will all
play a crucial role in the promotion of the 'Learning Age' (DfEE 1998a).

1.3 IMPORTANCE OF MOTIVATION IN WBL

Although the theoretical implications of WBL for gaining organisational and individual benefits are
clear, it can be seen that there are both large organisational and individual differences in adoption
of learning opportunities. These differences may be based around differential motivational
perspectives. Employee motivation may be based on the recognition of opportunities for personal
development. Employer motivation may be based on the benefits of more highly trained and
efficient employees potentially increasing productivity. Motivation has traditionally been seen as a
very important factor in behaviour in all areas of psychology not least in education and work-based
studies. Howard (1989) emphasises that motivation has always been of immense importance in
Adult Education (AE) both in theory and in practice. McCombs (1991) argues that individual motivation is the key element underpinning successful LLL, especially as LLL philosophy places responsibility for learning on the individual. Indeed, employees as proactive learners have been emphasised as the key to organisational survival and adaptation (Paxton 1976).

Thus, it can be argued that the key to the success of WBL, while supported by industry-education partnerships and appropriate funding bodies, relies heavily on the motivation of individual employees. Regardless of the extent of the learning opportunities offered to individuals working within organisations, these opportunities must still be recognised and taken up by individuals and the outcome must be an individual who has learnt from the experience and can apply that knowledge later. Thus a crucial step in WBL is to engage an individual's interest and motivation to participate in development activities, particularly as intense planning and design of employee development activities will not compensate for a pure lack of interest on behalf of the employee (Maurer and Tarulli 1994). Indeed, Shrivastava (1983) and Argyris (1999) stress the importance of the individual in promoting organisational learning, the organisation ‘learns’ through the medium of an individual’s own learning that is disseminated throughout the relevant parts of the organisation, thus committed to the ‘organisational memory’. Senge (1990) places great emphasis on the role of the individual in organisational learning:

*Organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning. But without it no organizational learning occurs.*

*(Senge 1990, p.139)*

Thus it is vital that the motivation of the individual is explored, which can both inform our understanding of how to enhance the learning experience and ultimately promote LLL (Paxton 1976, Noe and Schmitt 1986, McCombs 1991, Reid and Barrington 1997).

Learner motivation has been described as an essential prerequisite for effective learning outcomes both in traditional educational settings (Slavin 1991) and training at work (Goldstein 1986, Noe 1986, Tannenbaum et al 1991). Motivation in learning may play three vital roles, as an ‘energiser’ influencing someone’s enthusiasm to learn, as a ‘director’ directing the focus of learning, and as a ‘maintenance factor’ influencing the use of newly acquired knowledge and skills and future developmental activity (Noe and Schmitt 1986). The importance of understanding
motivation in the exploitation of LLL has been explicitly recognised in national policy papers (UK Government 1996). The learner must be ‘ready to learn’ or the learning outcome may be seriously hindered. An individual’s ‘readiness to learn’ or their ‘trainability’ may be composed of both their ability and motivation to learn (Goldstein 1986, Noe and Schmitt 1986). Indeed, Livneh and Livneh (1988) found that high LLL participants differed from low LLL participants on their ‘educatability’ (ability) and their readiness for change (ability to cope and use change as a learning process). Additionally, Tannenbaum et al (1991) found that those who completed training could be distinguished from those who did not on the basis of their pre-training attitudes, expectancies and commitment, which are hypothesised as important elements of motivation (this is explored further in chapter 2).

For learning to be meaningful the learner has to take an active role in the process, rather than being a passive recipient of training or education (Small and Grabowski 1992, Becker and Dwyer 1994). Motivation, for example intrinsic interest in the topic under study or the promise of a qualification at the end of a period of study, can help sustain an individual learner’s activity within the learning process (Slavin 1991). Noe and Wilk (1993) found that motivation was a key determinant in the uptake and prolonged interest in developmental activities amongst employees. In addition, it has been suggested that the motivation to engage in learning will be inversely affected by the motivation to engage in a competing activity (Slavin 1991). In the case of WBL there may be many competing activities at work within the constraints of limited resources such as time pressures. Furthermore, it is important for motivation to be sustained to promote the application of knowledge in appropriate settings (Walberg and Vguroglu 1986), hence an individual will both recognise a situation where new learning is relevant and apply that learning appropriately. Models have been proposed to explain situations where new learning would not be applied, for example if conflicting pressures and the associated prioritisation and scheduling of tasks and time management (a common occurrence in all organisations) are not adequately managed attempts to apply the new learning may be abandoned (Marx 1982).

In addition, Noe and Wilk (1993) and Maurer and Tarulli (1994) have highlighted the importance of environmental characteristics as determinants of motivation to participate in continuous learning. The learning environment is an important source of support and can promote LLL through flexible, facilitative organisational rules, a clear orientation to employee development and provision of
appropriate support (Noe and Schmitt 1986, Maurer and Tarulli 1994). Indeed, trainee perceptions of the environment, for example, task constraints (lack of resources), have been found to negatively impact on the effectiveness of training (Noe and Schmitt 1986). Thus, it is particularly important to explore employer-employee interactions as the organisational learning environment may impact on motivation and the success of WBL. The learning environment may promote WBL credibility and validity through: communicating employer commitment to WBL ‘from the top'; resourcing learners appropriately; making WBL opportunities explicit; cultivating an ethos and culture that respects learning and 'is ready to learn' (Brennan and Little 1996, Work-Based Learning Network 1996). Indeed, these proposals are echoed in the eight key characteristics for the success of LLL in the workplace identified by Paxton (1976), Sloman (1993) and Pedler et al (1997):

- Training needs analyses and goal setting should be based on employer-employee consultation, and linked with performance appraisal, organisational/individual needs and organisational strategy, with periodic reviews;

- High commitment is essential from employers (top management downwards) and employees alike;

- A learning climate should be fostered, characterised by a supportive environment providing tangible, informational and emotional support, and a focus on improving communication and employer-employee interactions;

- Training and development should be made available for all employees throughout their careers, and organisations should focus on expanding available developmental opportunities;

- Management development is vital to support implementation of a new learning philosophy;

- Regular evaluation, questioning and testing of current methods is needed;

- Organisations should support employee community involvement;
• Learning and development schemes should be linked to a quality programme such as liP.

Furthermore, Micholt (1992) and Hay (1995) propose several main action points to enhance the employer-employee relationship in a learning environment. These main action points, which clearly echo those recommended for the promotion of learning organisations, are:

• To make the developmental process transparent and clarify its implications, establishing a bond and clarifying what is offered and what is to be gained;

• Clarify expectations and role definitions, working together to apply appropriate frameworks. Recognise the power structures and different perspectives;

• Clarify needs and values, reviewing the current situation with regard to skills, knowledge and experience;

• Establish a detailed action plan where the employee actively contributes;

• Apply action, helping the employee to assume a level of autonomy;

• Appraise the process.

However, it should be noted that potential problems might arise from WBL opportunities competing with the commercial focus and workload, power structures within the organisation reducing flexibility, inadequate resourcing and a lack of understanding by the organisation and the individual about the commitment demanded by WBL.

liP is widely viewed as the Government's principal tool for promoting LLL within the workforce (Spilsbury 1995), and has particular significance to the current project as it relates specifically to employer-employee interactions. The liP standard offers a framework of best practice for promoting development within which organisations can plan current and future development of employees as an integral part of the organisational strategy (liP UK 1997). liP aims to promote a cyclical process of development, engendering a culture of continuous development through four key elements (liP UK 1997):
Chapter 1 - Lifelong and Work-Based Learning

- An IIP makes a **commitment** from the top to develop all employees to achieve its business objectives, with an emphasis on even-handedness and communication;

- An IIP regularly reviews needs and **plans** the training and development of all employees, with an emphasis on flexibility, resource identification and developmental need-resource matching;

- An IIP takes **action** to develop individuals on recruitment and throughout employment, with an emphasis on management-employee interactions;

- An IIP **evaluates** the investment in training and development to assess achievement and improve effectiveness, with an emphasis on demonstrating continual commitment to training and development and upgrading approaches appropriately.

These four factors bring together the recommendations for the promotion of LLL made by Paxton (1976), Sloman (1993), Brennan and Little (1996), Work-Based Learning Network (1996) and Pedler et al (1997) that are discussed above. It was estimated that in 1998 the IIP scheme covered about 30% of people in employment in the United Kingdom (DfEE 1998a). The national target for the end of 2000 was for 70% of organisations with over 200 employees and 35% of organisations with over 50 employees to be recognised within the IIP scheme (DfEE 1995).

Participants in the IIP scheme have been shown to reap benefits in terms of improvements in employee and organisational development (Spilsbury 1995). In particular, IIP has been shown to promote the creation of a new positive 'mind set' towards development, which is seen as the 'glue' holding the process together. Employees have demonstrated more motivation, confidence, flexibility, positive attitudes to work and increased productivity. Within organisations there has been an improvement in communication (more open and effective) and a more positive corporate image (CREATE 1996). The business benefits demonstrated by organisations in the IIP scheme are summarised in table 1.1 below.

The diverse nature of factors leading to a lack of motivation to learn in the workplace and potential negative effects on WBL further emphasise the need to investigate this issue further. Seagraves et al (1996) found that educational institutions and employers may be demotivated by the extent of the resources that they have to invest through their participation in a course of development.
Typically these are measured by staff time, financial considerations and provision of learning resources. Demotivating factors may include the need for those companies in the early stages of development to have rapid payback from any venture including training and education where the time and accreditation procedures involved in WBL may be a deterrent. Despite motivation to participate in WBL, companies may still not be willing or able to adjust their workloads to aid employees to complete a developmental programme resulting in withdrawal by employees from the projects. Further some companies may perceive WBL as a quick and easy method compared with traditional courses, which may be quite the opposite in reality. Companies may only realise the commitment required of them when they actually take part in a programme and this may lead them to withdraw.

Employees may well be demotivated by the amount of time that participation in a course might demand. However, they may have other pressures from family or peer groups. They may lack confidence in their ability to learn and study or their ability to achieve, and may even feel inferior within the class environment for more formal training. Further employees may not be able to adjust to the type of learning skills required of them or readily accept responsibility for their own learning (Seagraves et al 1996). Thus employers and employees alike may lack motivation to

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<tr>
<th>Raising the Bottom-Line</th>
<th>Building New Alliances</th>
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<td>Profits improved</td>
<td>Customers delighted</td>
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<tr>
<td>Turnover improved</td>
<td>Corporate image enhanced</td>
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<td>Productivity raised</td>
<td>Financial procedures rationalised</td>
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<td>Stock level reduced</td>
<td>Seamless processes implemented</td>
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<td>Training costs reduced</td>
<td>Bottom-line awareness raised</td>
</tr>
<tr>
<td>Staff turnover reduced</td>
<td>Credit control enhanced</td>
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<tr>
<td>Recruitment costs reduced</td>
<td>Networking increased</td>
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<td>Down-time reduced</td>
<td>High calibre recruits attracted</td>
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<th>Reducing Hassle</th>
<th>Creating New Mind Sets</th>
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<tr>
<td>Recruitment process simplified</td>
<td>Two-job mentality adopted</td>
</tr>
<tr>
<td>Training focus sharpened</td>
<td>Workforce motivated</td>
</tr>
<tr>
<td>Training outputs raised</td>
<td>Communication improved</td>
</tr>
<tr>
<td>Technology-people interface improved</td>
<td>Culture and values clarified</td>
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<tr>
<td>Absenteeism reduced</td>
<td>Workforce up-skilled</td>
</tr>
<tr>
<td>Performance criteria defined</td>
<td>Benchmarking encouraged</td>
</tr>
<tr>
<td>Accident rate reduced</td>
<td>Teamworking increased</td>
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Table 1.1: Business benefits of IIP (from CREATE 1996)
learn in the workplace, and an understanding of the factors influential in motivation is essential if WBL is to be positively promoted leading to successful learning outcomes. Furthermore, while it is important to establish what motivates the involvement of these groups in work-based learning schemes, it is also important to understand the costs of participation, which may be assessed by the extent of personal or financial investment demanded and may act as a deterrent to participation and hinder successful learning outcomes.

Despite the potential importance of motivation in WBL and the promotion of personal and organisational development, highlighted at a conference devoted to WBL (Work-Based Learning Network 1996), this issue has not as yet been extensively researched. Indeed, Patrick (1992), Tannenbaum and Yukl (1992) and Noe and Wilk (1993) highlighted that motivation in the wider training and development literature was a neglected but important topic that requires further exploration. Further, Maurer and Tarulli (1994) have emphasised that very little research has explicitly explored factors pertinent in voluntary participation in development activities. Although limited attempts have been made to study the motivational factors of both employers and employees in WBL (e.g. Thorpe 1993, Payne 1993), little attempt has been made to provide a holistic model encompassing employee perspectives. The focus of WBL research to date has been on operational issues including: synthesis of traditional educational systems and WBL; the form and content of WBL schemes; implementation of WBL in the workplace; quality assurance; individual ability (Brennan and Little 1996). However, a limited amount of work has also focused on the importance of the learning environment, indicating the need for an environment consisting of emotional, practical and political support which may be sought from a variety of sources including internal and external trainers, mentors, peers and line managers (Brennan and Little 1996). Thus this project will initially consider motivational factors from the perspectives of both employees and employers, although the employee perspective is emphasised in the latter stages of the project.

The WBL literature seems to take motivation for granted rather than explicitly studying its role in WBL. Therefore, rather than focusing explicitly on operational issues, individual ability, training effectiveness or learning outcomes, this project aims to explore the factors important in motivational perspectives in WBL. Such an approach is recommended by both Dweck (1986) and Noe and Schmitt (1986) who suggest that 'ability' has been well studied in training literature to the
detriment of motivation. Indeed, Shaw (1982) suggests that learning is mediated by the motivation of the learner as much as by ability. However, a review of the literature reveals that theories of individual motivation encompass a wide and diverse set of issues: individual needs; values; coping mechanisms; individual goals; past experiences; demographic characteristics. Given the problematic definition of motivation, this project adopts a framework proposed by Locke and Henne (1986) (and later developed by Locke 1991) that attempts to establish the links between the various elements of motivational theory. Chapter two explores and develops this framework, drawing on various disciplines such as training and development, work motivation, career development and stress and coping models. This framework will be used as a basis for building a model of the motivation-WBL process.

1.4 AIMS AND OBJECTIVES

This thesis has two principal aims:

Aim 1

Firstly, to explore the WBL process from a motivational perspective, incorporating views from both employer and employee and to develop an initial model for understanding the WBL-motivation process (based on the framework suggested by Locke and Henne 1986 and Locke 1991). In order to achieve this aim the following objectives are emphasised:

1. To establish employer-employee understanding of WBL and gain an insight into the scope of WBL activities recognised;

2. To explore the nature of and interaction between motivational factors in the WBL process from both an employer and employee perspective;

3. To examine areas of congruence and dissonance between employer and employee motivational perspectives in the WBL process and the potential impact on the motivation process;

4. To develop a model that aids understanding of motivation in the WBL process.
Chapter 1 - Lifelong and Work-Based Learning

Aim 2

Secondly, having developed an initial model of motivation in WBL, the thesis emphasises the employee perspective in the WBL process and aims to consolidate the micro model of motivation in WBL. The following objectives are specified:

5. To more fully explore the definition and nature of factors underlying motivational perspectives in WBL from an employee standpoint and amend the micro model accordingly;

6. To test the modified micro model of motivational perspectives in WBL from an employee standpoint in terms of:

   a) The overall model fit for the data;
   b) Identification of the significant factors within the model;
   c) The relationships between these factors.

7. To highlight issues important for the promotion of motivation and more successful partnerships between employer and employee in the WBL process, using the developed model as a basis for recommendations, with particular emphasis on organisational support.

1.5 Thesis Structure

Thus the ultimate aim of this thesis is to develop a micro-model for understanding employee motivational perspectives in WBL. In the first stage employer and employee perspectives will be explored, whilst in stages two and three the employee perspective will be exclusively focused on.

Exploration of the motivational perspectives in WBL will be based on the original Locke and Henne (1986) framework. Chapter two explores and expands upon this framework, drawing on literature from diverse backgrounds, including work motivation, career development, training and development and stress and coping. This project follows three key stages consistent with recommended model building steps, following an iterative process of model re-specification (Tabachnick and Fidell 1996, Hair et al 1998), and the methodology adopted in the study is described in chapter three.
Stage one represents the initial exploration of the motivation process in WBL, incorporating views from both employer and employee and developing a conceptual model. The results of this stage are presented in chapter four. Stage two of the thesis concentrates on employee motivational perspectives in WBL and of the organisational approach to WBL. Factors contained within the proposed model are further explored using factor analytic techniques to identify distinct underlying factors and their definition as measured against the theoretical background (chapter five). In stage three the model is tested using Hierarchical Multiple Regression to identify significant factors and aid understanding of the nature of inter-factor relationships (chapter six).

Thus the three stages of model evolution move towards a deeper understanding of motivational perspectives in WBL, moving from an exploratory stance through to consolidation in terms of model specification. The resultant model will be discussed in chapter seven and subsequently used as a basis to identify potential practical implications for enhancing the WBL process.

1.6 SUMMARY

WBL is an important element in the drive towards the promotion of LLL, Learning Organisations and the Learning Society. Workplace learning may play a key role in aiding employer and employee survival and growth in today's economic climate. Motivation and learning environments characteristics have been highlighted as major elements in the WBL process. However, motivational processes underpinning WBL have been neglected by researchers in the field leading to the lack of a holistic model of motivation in WBL encompassing employer-employee perspectives. A main focus of this thesis is to develop a framework representing the motivational process in WBL and the next chapter takes a significant step towards developing that framework.

An understanding of motivational issues may enhance the understanding that informs programme design and enable the identification of strategies to promote participation rates and partnerships between employers and educational establishments, enhancing the education-industry interface. In a wider context the importance of such issues is emphasised by the DfEE (1998a) in its Green Paper on LLL and the philosophy of the University for Industry (DfEE 1998b). These papers emphasise the nurturance of employer-employee partnerships and adoption of the LIP standard as key in the promotion of successful LLL and ultimately the learning society. Thus this project can
be placed firmly within the current governmental concerns for the promotion of LLL, of which WBL is a significant part.
CHAPTER 2

BUILDING A MOTIVATION FRAMEWORK
Building a Motivation Framework

The previous chapter highlighted that motivation potentially plays an extremely important role in the promotion of successful Work-Based Learning (WBL) outcomes in both individual and organisational terms, although lack of a holistic theory currently hinders our understanding of the relationship between motivation and WBL. However, the abundance of research in areas such as 'work motivation', 'adult education participation', 'training' and 'career development' may prove useful in underpinning the development of a motivation-WBL model, particularly with reference to the dual role of employee-learner played by participants in WBL. Drawing on the prominent findings from these disciplines, this chapter presents a general framework for building a model of the relationship between motivation and WBL and highlights the salient factors to be explored in the first stage of the research.

2.1 A FRAMEWORK FOR MOTIVATION AND WBL

The abundance of motivational theories has resulted in difficulties defining motivation, a lack of demonstrable links between competing theories, difficulties in inter-study comparisons and problems in the pragmatic application of findings within the organisational setting (Locke and Henne 1986, Landy and Becker 1987, Klein 1989). Furthermore, Locke (1991) stresses the need for frameworks that allow for the integration of theories.

The difficulty in defining motivation is emphasised in a study by Kleinginna & Kleinginna (1981) who collected 140 different definitions of motivation. Some researchers have posed the question: 'What is motivated behaviour?' suggesting that behaviour falls on a continuum from reflex behaviour through consciously initiated behaviour to overlearned/automatic behaviour or habits. Motivation may only play a part in this middle set of behaviours, that is, those that are consciously initiated (Landy and Becker 1987). This may be particularly pertinent to the issue of WBL. Individuals consciously participate in formal WBL activities and the learning outcomes are likely to be explicit. As learning opportunities become more informal, learning outcomes may be less explicit and participants may be less aware that they are participating in a learning opportunity.
For example, everyday tasks offer the opportunity for experiential learning, however an individual is likely to concentrate on undertaking their work duties rather than focusing on the potential learning outcomes resulting from such experiences. WBL philosophy seeks to make such informal learning opportunities more explicit to employees, raising awareness of the potential learning outcomes from such situations in order to maximise benefits. Accordingly, this thesis will explore awareness of various types of learning opportunities, including the extent to which individuals recognise informal learning opportunities, and the associated motivational issues.

It is, however, generally recognised that motivation is concerned with: initiating behaviour; the direction of behaviour; determination of the intensity of behavioural effort; persistence of behaviours (London 1983, Klein 1989, Courtney 1992, Arnold et al 1998). Although various theories may place differential emphasis on each of these elements, it is clear that motivation is both multidimensional and complex in nature.

The competition between theories has led to other salient issues being ignored, not least how each theory may complement one another (Mitchell 1982, Locke and Henne 1986, Klein 1989, Locke 1991). Traditionally researchers have attempted to produce one theory that encompasses all human behaviour and at the same time criticising contemporary theories. However, it has been noted that work motivation theories have been grouped into four distinct categories (Locke and Henne 1986, Landy and Becker 1987, Aamodt 1991, Locke 1991, Coates 1993), focusing on:

- Needs - 'a requirement of the organism's survival and well-being' (Locke and Henne 1986, p. 1) - what needs are addressed by the action/behaviour and what are the origins of these needs, for example physical versus psychological well-being;

- Values - 'what an individual considers are good or beneficial' (Locke and Henne 1986, p. 3) - what objects/views/behaviours are valued by individuals as a means to address a particular need, for example money, moral values, careers, achievement;

- Goals - 'goals are a means of actualising values' (Locke and Henne 1986, p. 3) - what goals and timescales do individuals set, are they realistic and achievable, what effort do they put into the action, for example pursuing education, expectancy and self-efficacy have a role to play in choosing goals;
Chapter 2 - Building a Motivation Framework

- Action/outcome - the ultimate outcome of the motivational process (behavioural and emotional) – actual performance, rewards given/received and satisfaction.

Although theories within these categories have been viewed as competing theories, it has more recently been hypothesised that these describe different parts of the same process (Locke and Henne 1986, Landy and Becker 1987, Schein 1988, Klein 1989, Locke 1991).

This hypothesis is based on several proposals:

- Each theory relates to a different level of analysis in the relationship linking motivation to behaviour;
- Inadequacies of some theories can be compensated for by aspects of other theories;
- Theories may be suited to explain different behaviours and actions in different situations.

A theoretical framework (figure 2.1) provided by Locke and Henne (1986), and developed further by Locke 1991, aims to overcome some of these problems by linking theories together within a coherent multi-stage structure. Others in the field have identified the need for such a metatheory (e.g. Mitchell 1982, Landy and Becker 1987, Klein 1989). Indeed, McCombs (1991) emphasised the need to integrate motivation theories to produce a more holistic approach towards understanding motivation in the LLL context, and thus inform the promotion of LLL.
Given the problems regarding the definition of motivation, inter-study comparisons and pragmatic application of theory, a conscious decision was made to utilise the Locke (1991) framework as an underpinning theory guiding the construction of a model of the motivation-WBL process. This framework was originally proposed as an 'organising device' identifying main concepts in motivation research and the interrelationships between those concepts (Locke and Henne 1986, Locke 1991). This structure is useful for the current project as it aims to: firstly, explain why some theories are unsuccessful at explaining outcomes in comparison to others; secondly, explain how each theory may compensate for the inadequacies of the previous theory; thirdly, provide a coherent framework that will underpin investigation and provide a clear focus for exploration of salient issues.

The distance between each ‘theory’ or stage and outcomes (behaviour, rewards and satisfaction) is intentional, representing the relative ability of each theory to explain resultant outcomes. Needs theory, for example, is the furthest away from outcomes as it is the least successful in predicting specific outcomes (Locke and Henne 1986, Locke 1991). However, this is not surprising as needs theories represent only a very preliminary stage in the relationship between motivation and outcomes, representing only a reason for an individual to act. Need deprivation only promotes discomfort in the individual, it does not provide the necessary knowledge of how to address that need (Locke and Henne 1986, Locke 1991). As progressive stages are undertaken in this process...
so there is more scope for diversity in individual behaviour and theories are progressively more successful at predicting specific outcomes. Indeed, Locke (1991) distinguishes between the ‘motivation hub’, indicating the direct determinants of action:

*What people do is powerfully (though not solely) influenced by their goals or intentions and by their perceived confidence in being able to take the actions in question.*

*(Locke 1991, p.297)*

and the ‘motivation core’:

*I would consider the motivation core to be individual values. ... What makes each person a unique individual and what guides his actual choices and actions are his values.*

*(Locke 1991, p.297)*

The importance of Maslow’s theory of need-satisfaction is highlighted by Locke (1991), where the cycle of motivation is completed when an individual is satisfied that their original needs have been fulfilled by the intervening stages of behaviour, performance and reward. A feedback loop is thus indicated as perceptions of satisfaction are likely to inform future values and goal setting. Locke and Henne (1986) further propose that this ordering of theories, where each stage represents another ‘building block’ in the motivation process, demonstrates how different categories of theories can account for the inadequacies in a previous category of theories.

Thus the theories in each of the four categories represent different levels of analysis in the same process and to fully understand the motivation-outcome relationship we need to understand all these different levels of analyses. The Locke and Henne (1986) and Locke (1991) frameworks present motivation as a dynamic process composed of a series of successive interlocking stages, and compensates for the absence of a motivation and WBL model. This general structure was originally aimed at understanding work motivation theories, and the rest of this section gives an overview of how research from areas such as ‘work motivation’, ‘adult education participation’, ‘training’ and ‘career development’ are linked to this framework. Whilst the rest of this chapter develops this framework by exploring parallels with models from these diverse research areas.


2.1.1 ADULT EDUCATION

Examining some of the major models that have been developed in the adult education field (e.g. Rubenson 1978, Cross 1981, Darkenwald and Merriam 1982, Cookson 1986) it is clear that they share a number of common features (Edwards et al 1993), and most importantly these features can be categorised into the key stages identified by Locke and Henne (1986) and Locke (1991).

Table 2.1 highlights the similarities between these models according to the motivation framework (figure 2.1) presented above.

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<tbody>
<tr>
<td>Needs</td>
<td>• Current needs based on present situation</td>
<td>• Life transitions</td>
<td>• Stimuli, e.g. job change</td>
<td>• Current situation</td>
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<td>• Perception of needs</td>
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<tr>
<td>Values</td>
<td>• Expectancy</td>
<td>• Attitude to learning</td>
<td>• Perceived value of Adult Education (AE)</td>
<td>• Attitudinal dispositions</td>
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<tr>
<td></td>
<td>• Valency</td>
<td>• Expectancy</td>
<td>• Readiness to participate</td>
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<tr>
<td>Goal Setting</td>
<td>• Force to participate in AE</td>
<td>• Participation in AE</td>
<td>• Probability of participation in AE</td>
<td>• Participation in AE</td>
</tr>
<tr>
<td>Outcomes</td>
<td>• Previous experience</td>
<td>• Self-evaluation</td>
<td>• Initial individual and familial characteristics</td>
<td>• Social background and roles</td>
</tr>
<tr>
<td></td>
<td>• Congenital properties</td>
<td></td>
<td>• Preparatory education and socialisation</td>
<td>• Intellectual ability</td>
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<tr>
<td></td>
<td>• Active preparedness</td>
<td></td>
<td>• Socio-Economic Status (SES)</td>
<td>• Personality</td>
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<tr>
<td>Individual characteristics</td>
<td>• Perception of internal/external environment (resource availability and utility)</td>
<td>• Informational support</td>
<td>• Barriers</td>
<td>• Information</td>
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<td></td>
<td></td>
<td>• Opportunities and barriers</td>
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<td>• External context</td>
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Table 2.1: Parallels between Locke framework (1991) and models of Adult Education (AE)

Thus at a very basic level, to understand participation in Adult Education (AE) we also need to understand the origins and nature of a need for learning, an individual's attitude to or value of particular learning opportunities to address that need and what goals that individual sets themselves. Furthermore, these models reflect similar multi-stage processes, where successive stages amplify inter-individual differences. Indeed, Cookson (1986) states explicitly that factors in
successive stages mediate the effects of prior variables, and that progression through the stages is accompanied by greater specificity or understanding of individual differences. The value of these theories lies in their concentration on the decision-making process to participate in adult education, operating on a more pragmatic, less abstract level. Other theories of adult education participation also fit into the framework identified by Locke and Henne (1986), albeit focusing on a single stage, most notably the work of Houle (1961) and Boshier (1971) that concentrates on the origins of learning needs.

These adult education models do however highlight other factors that could be included in this general framework of motivational theories. In particular, individual characteristics such as the importance of previous work or learning-related experiences (Rubenson 1978, Cross 1981), individual skills, knowledge or abilities (Rubenson 1978), individual characteristics such as age, gender and socio-economic status (Darkenwald and Merriam 1982) and an individual's knowledge of what learning opportunities are available and how to exploit these (Cross 1981, Cookson 1983). Environmental issues are also raised, such as the existence of learning opportunities and supports/barriers to learning (Cross 1981, Darkenwald and Merriam 1982). Indeed, the importance of the learning environment in influencing WBL was highlighted in chapter one.

2.1.2 CAREER DEVELOPMENT

Career development theories represent an area where work and learning motivation are intertwined and provide some theoretical insight into the nature of development motivation. Super and colleagues (Super and Bohn 1970, Super et al 1996) emphasise the developmental nature of needs, values and goals, suggesting that career development is a dynamic process composed of several stages (exploration, establishment, maintenance and decline) working towards a well-defined career pathway. Individuals at different stages in this process will have differing career-related needs, values and goals, which become progressively more focused as a career is shaped. London (1983) suggests that the stimulus for career motivation is based both on the extent to which one's career is central to ones' life and the value placed on upward mobility. Super also emphasised that an individual's identification with an occupation acts as an important stimulus in career development. Therefore, individuals who are motivated during early stages of career development may not have a clear direction until they have established how central work is to their
lives and the value they place on factors such as dominance, advancement, recognition and money. Indeed, career development stresses that learning opportunities should be seen in terms of their value to the individual rather than to the organisation, highlighting the importance of the individuals’ perspective in learning (McCormick and Ilgen 1987), a point emphasised by Rubenson (1978).

However, it has been suggested that transitional periods related to career development may be becoming less distinct in the present uncertain employment environment, where adjustment or development may be becoming more continual rather than in a series of well-defined stages (Nicholson 1996). Indeed, this parallels the philosophy of Lifelong Learning (LLL) and more specifically WBL, which emphasises continual development and adjustment on a greater scale than was previously expected within employment patterns. Learning, therefore, may be a major component in successful adaptation or coping (Evans 1985). The concept of lifecycle transitions is thus integral in the discussion of WBL, posing the question ‘is WBL focused on adjustment or learning for the sake of learning?’ For example, Aslanian and Brickell (1980) found that the majority of people in Adult Education were focused on lifecycle needs, the minority were learning orientated. However, there is some dispute over the proportion of adjustment versus learning-orientated individuals as other studies have not found so pronounced a bias (Courtney 1992).

In terms of individual characteristics that aid the transition process, career development theories emphasise that the strength and persistence of career motivation may be affected by factors such as ‘career insight’, ‘career resilience’ (London 1983) and experiential learning or feedback (London 1983, Super et al 1996). ‘Career insight’ relates to the practical issues of ‘goal setting’, involving a realistic appraisal of ability, setting clear goals and pathways and realistically appraising career outcomes. ‘Career resilience’ relates to the extent to which an individual can cope with adverse events. Indeed, the stress and coping literature provides insight into adaptive versus non-adaptive coping strategies, and the importance of identifying available internal and external resources. The centrality of learning is also emphasised, that is individual experiences can shape an individual’s concept of their career and abilities. Thus both Super and London echo the later ‘goal setting’ stage of the Locke and Henne framework, including the importance of feedback. Indeed, London (1983) stresses that career motivation is a multi-dimensional dynamic process rather than a
unidimensional concept. Career development issues also highlight the importance of understanding individual perspectives in tandem with key lifecycle issues (Nicholson 1996).

2.1.3 STRESS AND COPING

Stress and coping models, such as that proposed by Lazarus and Folkman (1984), see figure 2.2, provide essential insight into the adaptation process, particularly the focus on individual appraisal of a situation and range of potential coping strategies. Indeed many of the factors discussed within the motivational framework are reminiscent of stress and coping theories (e.g. Lazarus and Folkman 1984), particularly the need to focus on a chain of events starting with a stimulus (need), evaluating values, goals and commitment and taking account of internal and external resources that influence an individual's ability to adapt or cope.

![Figure 2.2: Model of stress and coping (Lazarus and Folkman 1984)](image)

However, it is particularly important to explore the concept of appraisal (Lazarus and Folkman 1984):

- Primary appraisal of stressor - significance to the individual in terms of their well-being;
- Secondary appraisal - of how an individual can deal with the situation;
- Reappraisal - appraisal of success.

This emphasis on appraisal underlines the importance of understanding individual perceptions, as mentioned previously. It is important to note that appraisal underlines the relevance of the situation to the individual and concomitant appraisal of available resources. Thus learning must be seen to be relevant and useful to the individual, a point discussed in section 2.3. Appraisal can
lead to the use of ‘adaptive’ versus ‘non-adaptive’ coping strategies, reflecting the Locke and Henne (1986) values-goal setting mechanism.

Thus, the importance of cognition, in particular the cognitive abilities of learning, perception/identification and appraisal/reappraisal, are proposed to be related to all the concepts identified in the motivational framework (Locke and Henne 1986). An individual must be able to perceive/identify a need, learn values and how actions can address needs and values, he must also be able to set goals and determine a means of achieving them based on values and appraisal of the situational context and of self. Indeed, Maslow (1987 - posthumous publication) acknowledges the importance of the freedom of the individual to be able to act and the level of cognitive capacities (perceptual, intellectual, learning) as a set of ‘adjustive tools’ essential for the ability to satisfy needs. Furthermore, in line with AE models, Lazarus and Folkman (1984) also emphasise environmental conditions as important in the ‘coping’ process, explicitly highlighting social support as an important environmental resource and recognising that the environment may constrain the individual.

2.1.4 TRAINING

Training models (e.g. figures 2.3 and 2.4) have emphasised the importance of motivation in the promotion of successful learning and training outcomes, motivation being a necessary condition for learning to occur (Noe 1986, Keller and Kopp 1987). Despite the potential importance of motivation in training, few models exist that address this issue directly, rather research has focused on methodological evaluation and trainee ability (Noe 1986, Cohen 1990, Patrick 1992). Indeed, much of the research on motivation to learn has been focused on educational rather than work settings (Noe 1986). It seems that the importance of motivation in learning effectiveness is almost assumed rather than explicitly investigated.

-Attention- Relevance- Confidence- Satisfaction

Figure 2.3: ARCS model of instructional design (Keller and Kopp 1987)
Both Noe's (1986) model and Keller and Kopp’s (1987) ARCS model identify factors congruent with the stages identified in Locke and Henne's (1986) framework. Noe (1986) emphasises the importance of understanding an individual’s reaction to skills assessment, i.e. identification of developmental needs. Identified needs must be credible to the individual concerned.

Furthermore, the ‘value’ stage of the framework is emphasised by the importance placed on making training relevant (valent) to the individual and promoting employee confidence (expectations) that the desired outcomes can be achieved. Desired outcomes may include prestige, career movement, self-confidence and increased salary. Noe (1986) also draws on career development as an important issue, particularly key issues such as the degree an individual identifies with the job and matching training with career goals. Feedback is again identified by these theories as integral to the motivation process. Motivation to learn is akin to the force to participate in AE models (Rubenson 1978) and in work motivation theories the acceptance or commitment to learning goals (see section 2.4). The Noe model is particularly useful as it links motivation to learn with training outcomes, such as successful learning, changes in behaviour and reaction to training (or satisfaction, also echoed by Keller and Kopp 1987).
Furthermore, these models also highlight environmental issues. Implicit in the ARCs model is the need for organisations to adhere to instructional design that promotes motivation. Noe (1986) explicitly states that environmental conditions (ranging from practical to emotional support and resources) are an important influence on motivation. Indeed, the important influence that the training environment has on motivation has been supported through research (Cohen 1990). As a result of such research, a supportive learning environment has been defined as one that applies fundamental learning principles, for example feedback systems, and places learning in context, enhancing transfer of knowledge from the training room to the work setting (Goldstein 1986). Others (Arnold et al 1991) have also stressed the importance of a supportive learning environment where training is based on systematic assessment of needs with established aims and objectives and an effective evaluation scheme that informs the nature of future training.

The importance of external support mechanisms is also underlined by London (1983), who identifies situational variables such as HRM policies, leadership styles and social support as having an important influence upon career motivation. Recently, Thompson et al (2001) have also demonstrated the influence of HRM policies on the internal culture and the extent of management development in organisations. It is clear that Lazarus and Folkman (1984) also emphasise the importance of the interaction between the individual and the environment. Therefore, organisations need to be aware of and aid transitional stages through promotion of learning opportunities to support employee development (McCormick and Ilgen 1987). Indeed, organisations have been found to have a great impact on participation in learning opportunities through their policies and regulations and their orientation to employee development as perceived by individuals (Maurer and Tarulli 1994). Both Coates (1993) and Argyris (1999) identify the potential complications arising through the complex social relations between employees and the power relationship between employer and employee. Furthermore, London (1983) suggests that it is vital that individual characteristics (career identity, insight and resilience) are congruent with situational variables (particularly the organisational environment). Indeed, the person-environment fit is a key factor in many career development theories (Osipow 1990). In a ‘learning organisation’ the individuals within the organisation ‘learn’ but the organisational conditions may significantly impact on individual behaviour and learning (Argyris 1999).
This section has presented a framework derived from work motivation theories that may prove useful in understanding motivation and WBL. Models from a number of research areas ('adult education', 'career development', 'stress and coping' and 'training') have been presented in order to draw parallels between main research findings and the motivational framework. The original framework suggested by Locke and Henne (1986) and Locke (1991) for understanding the links between different stages in the work motivation process is strongly echoed by these models in terms of both salient categories and the multi-stage process. These parallels support the utility of applying the Locke and Henne (1986) and Locke (1991) framework to the development of a WBL-motivation model, particularly as it seeks to draw together salient factors from a range of research. The framework benefits from being simplistic in its efforts to link distinct stages, although it should be recognised that the motivation process is proposed as continuous with potentially 'fuzzy' boundaries between stages. The framework may need to incorporate other important factors, such as individual demographics, prior experiences and the influence of organisations on an individual's participation in learning opportunities (learning environment). This discussion also highlights the potential nature of the WBL process as one of continual adaptation and flexibility, which is clearly emphasised in the LLL literature and parallels can be drawn with stress and coping models. This focuses our attention squarely on the individual's perspective of this development process and their perceived ability to cope. Indeed, Locke and Henne (1986) recognise the need to understand these cognitive aspects within the first three stages of their framework (needs, values and goal setting). The importance of understanding cognition in motivation has also been emphasised by others (Landy and Becker 1987). The nature of the factors identified within this framework will be explored in more depth in the following sections, drawing on 'work motivation', 'adult education', 'training', 'stress and coping' and 'career development' research.

2.2 Motivational Needs

Theoretically needs represent the fundamental basis for human behaviour, the first 'building block' in the motivation process, as indicated in the motivational framework (Locke and Henne 1986, Locke 1991 – figure 2.1). The essential element throughout 'needs' theories is that there is a set of needs that serve as a fundamental basis to individual behaviour. In the motivation-behaviour process, this initial stage entails that an individual both experiences and identifies 'unfulfilled' needs; subsequent framework stages will lead to an examination of the various ways that may
satisfy these needs (Locke and Henne 1986, Locke 1991). Table 2.2 indicates how some of the more popular needs theories are related to one another and highlights the similarities between these theories in terms of need categories, regardless of whether needs are arranged in a hierarchy or along a continuum.

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<tbody>
<tr>
<td>Physiology</td>
<td>Avoidance of pain, ensuring safety</td>
<td>Existence</td>
<td>Deficiency (life chance)</td>
<td>Extrinsic</td>
</tr>
<tr>
<td>Safety</td>
<td>Relatedness</td>
<td></td>
<td>Social Interaction</td>
<td>Intrinsic</td>
</tr>
<tr>
<td>Social (Belongingness, love, affection)</td>
<td>Psychological growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Esteem</td>
<td>(Self-realisation, identity &amp; real growth intrinsic to self)</td>
<td>Growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Actualisation</td>
<td></td>
<td></td>
<td>Growth (life space)</td>
<td></td>
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Table 2.2: Comparison of general, work and education needs theories

While the number of needs categories and ‘labels’ may be different, the underlying concepts are to a high degree congruent. Useful concept definitions have been summarised by Cherrington (1991) as follows:

- **Intrinsic needs** - intrinsic to self, including self-esteem and self-development;
- **Social interaction needs** - desire for social approval, affiliation and companionship;
- **Extrinsic needs** - biological comforts and physical rewards.

However, additional need hierarchies have been proposed that operate in parallel with these ‘basic needs’ in order to account for curiosity and exploration behaviours (Deci and Ryan 1985, Maslow 1987). In addition to the better-known categories, Maslow (1987 - posthumous publication) also proposed the existence of two other needs hierarchies - aesthetic and cognitive needs. Aesthetic needs consist of, for example, the need for succinctness, parsimony, elegance, simplicity, precision and neatness, and may be fulfilled in an infinite number of ways, such as listening to a favourite piece of music or visiting an art gallery. The cognitive needs consist of the need to understand, systematise, organise, analyse, look for relations and meaning and to construct a
system of values. These cognitive needs lead us to pursue and develop ideas; it is in essence a continual process of exploring, understanding and learning. To different degrees individuals are naturally interested in exploring novel situations, indeed this is an important element of our own survival. Reeve et al (1986) found that 'excitement' (defined as 'feeling alive and active, one of energy and stimulation' p. 352) formed an important element of motivation in the initiation and maintenance of behaviour, that is, 'excitement' successfully differentiated between individuals' choices of activity. Furthermore, West (1999) emphasises the importance of the workplace providing an outlet for fundamental exploratory and creative expression needs, which can be harnessed for their positive impact on organisational processes. Indeed, Herzberg (1968) emphasised the importance of the need to search for knowledge and patterns, and creativity in promoting psychological growth. Cacioppo and Petty (1982) also distinguish a need for cognition, defined as an individual's preference to engage in and enjoy complex thought.

In WBL the relevance of categories such as 'cognitive needs' is clear, learning encompassing the need to know and understand the world around us. Indeed, both Keller and Kopp (1987) and Gagné (1985) stress the importance of attracting a learner's attention in a learning situation by arousing interest and curiosity, through presentation of novel stimuli and problems. This is an important stage in ensuring more productive learning outcomes, Reid and Barrington (1997) emphasising that curiosity is one of the trainer's 'most powerful allies' (page 108) - a proposal based on their own experiences of training within diverse organisations. Furthermore, Livneh and Livneh (1988) found that high LLL participants were 'naturally inquisitive', and McCombs (1991) emphasises the natural curiosity of learning as key to the promotion of LLL. Thus cognitive needs may produce an 'energy' that is essential in the learning environment, and concomitant with the LLL philosophy of continual learning. Reid and Barrington (1997) also warn against the danger of destroying learner curiosity through adherence to a strict structure and logicality, all too often prevalent in organisational training processes. Curiosity, therefore, is a repeated theme throughout the motivation and training/education literature, and the natural need to understand and develop competencies should be encouraged.

The three sets of needs (basic, cognitive and aesthetic) are intricately linked, and are proposed to form the basis of behaviour, although the links between these categories are complex. Maslow
hypothesises that cognitive needs may be pre-requisites for the ability to achieve 'basic needs'. Indeed, Locke (1991) emphasised that:

*people do possess volition, that is, freedom to think or not to think. ... People need to choose to think in order to be able to live*

(Locke 1991, p. 291)

Furthermore, Alderfer (1972) emphasised the role of cognition in need fulfilment by suggesting that higher level needs (e.g. self-actualisation and ego needs) are more abstract and therefore more cognitively demanding than the lower concrete levels (e.g. physiological, safety). If the strength of cognitive needs does not meet the energy demanded for exploring ways of fulfilling the higher level needs an individual may abandon that level in favour of a lower level need. Individual ability and skills are, of course, also important elements at this point as well as throughout the motivation process (Landy and Becker 1987, Locke 1991, Tannenbaum and Yukl 1992). An individual must want to fulfil needs and explore ways of achieving that need - emphasising the subjectivity of need evaluation.

Comparing needs theories from diverse backgrounds (particularly those relating to learning and work) reveals that learning and work may tap into a common set of needs, relevant to WBL. A prominent study in the WBL field explored the potential needs addressed by WBL (Seagraves et al 1996), and findings clearly show the relevance of the intrinsic, extrinsic, social and cognitive categories to WBL. In terms of employee benefits, cognitive and intrinsic factors typically focus on self-development defined by a number of factors: cognitive development; new skills acquisition; enhanced confidence; flexibility; fulfilment of potential (missed opportunities at school); refreshment; valued by organisation; recognition; achievement; increased responsibility; career development. Extrinsic factors included: the gaining of a qualification; credit; learning units; promotion/ advancement; one step ahead of colleagues; financial reward. Social needs included: seeking new friends; networking. Similarly, Nordhaug (1989) studied reasons for participation in training in the workplace. In this factor analytic study three dimensions were highlighted as reasons for training participation that echoed the needs categories already discussed. Firstly 'career development', reflecting extrinsic factors (e.g. promotion), secondly 'psychosocial development', reflecting both intrinsic (e.g. self-confidence) and social (e.g.
enhanced networks) factors, and, thirdly 'motivation to learn' that reflects cognitive factors (e.g. increased interest in the subject of training).

Similar concepts are reflected in the reasons that individuals give for participating in adult education: promotion; become involved with new people; interest in a particular topic; to gain confidence; to enhance work skills (Courtney 1992). Newstead et al (1997) identify three categories reflecting reasons for participation in AE: 'stop gap' (e.g. social life, fun); 'means to an end' (e.g. enhancing career and job prospects, and increasing quality of life); 'personal development' (e.g. increase in potential, knowledge acquisition). Similarly, Boshier and Collins (1983) in a large sample factor analytic study found that motivational orientations for adult education may be expressed in terms of 'professional development' (career and salary), 'external expectations' (conform to external expectations), 'social stimulation' (escape from boredom and routine), 'cognitive interest' (learning for its own sake) and 'social service' (learning for the sake of the community). It is evident that the benefits of adults returning to education, which have been well-documented, reflect the WBL benefits identified above, particularly prominent among these are: professional advancement; personal development.

Therefore, in terms of WBL it would be reasonable to expect participants to identify similar concepts, described above, as a basis for their motivation to participate in WBL. Indeed, Seagraves et al (1996) directly compared Education Participation Scale (Boshier and Collins 1983) scores between their sample of Work-Based Learners and that of Boshier and Collins's adult learners (table 2.3).

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Professional Advancement</td>
<td>2.28</td>
<td>2.74</td>
</tr>
<tr>
<td>Cognitive Interest</td>
<td>3.03</td>
<td>2.57</td>
</tr>
<tr>
<td>Social Stimulation</td>
<td>1.93</td>
<td>1.72</td>
</tr>
<tr>
<td>Social Contact</td>
<td>1.89</td>
<td>1.55</td>
</tr>
<tr>
<td>External Expectations</td>
<td>1.72</td>
<td>1.54</td>
</tr>
<tr>
<td>Community Service</td>
<td>2.28</td>
<td>1.53</td>
</tr>
</tbody>
</table>

Table 2.3: Mean EPS scores for adult learners and work-based learners (adapted from Seagraves et al 1996)

This table emphasises the importance of cognitive interest and professional advancement in WBL, as indicated by other studies (e.g. Nordhaug 1989). Social orientations seem to take a lesser role
in work-specific learning. Furthermore, although Newstead et al (1997) have found some age differences in terms of reasons to participate in AE (see table 2.4), it is evident that 'means to an end' (containing elements of professional advancement) and 'personal development' (containing elements of cognitive interest) figure prominently across all age groups, social reasons (in 'stop gap') again taking a lesser role.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Stop Gap</th>
<th>Means To An End</th>
<th>Personal Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-20</td>
<td>14</td>
<td>65</td>
<td>21</td>
</tr>
<tr>
<td>21-24</td>
<td>11</td>
<td>71</td>
<td>18</td>
</tr>
<tr>
<td>25+</td>
<td>4</td>
<td>62</td>
<td>34</td>
</tr>
</tbody>
</table>

Table 2.4: Distribution of reasons for participating in AE across age groups (%) - (from Newstead et al 1997, p.188)

However, it is acknowledged that the third category (25+) is a very large group and further age group differences may be apparent if this group were to be divided into smaller sub-groups.

However, it is important to note that, in the studies quoted, individuals do not report 'pure' needs as reasons for participating in learning. For example, participants do not typically state 'esteem reasons' or 'cognitive reasons', rather participants tend to speak in terms of outcomes that they (subjectively) value, making measurement of 'pure' needs difficult and leading to confusion in our inferences regarding which needs are being served. For example, does professional advancement serve to fulfil esteem or safety needs - it is feasible that it could serve both. This issue is critical in the distinction between 'values' and 'needs' - values may serve different needs, they are not a need in themselves but a vehicle to fulfil needs. Maslow (1987 - posthumous publication) recognised that 'needs' in the average person may not be directly measurable, but more often may be conceptually derived from the range of specific conscious desires or values (means to an end rather than ends in themselves). Maslow draws on psychotherapy to understand how needs driving behaviour may not be directly within an individual's consciousness. Locke (1991) subscribes to the view that some needs may exist even if an individual is not aware of them. Indeed, this would help explain why 'needs' theories have been much criticised for being empirically difficult to test (Locke and Henne 1986, Landy and Becker 1987). Therefore, behind a reported desire or value there may be a more fundamental need as defined by the basic needs hierarchy, but this issue may be empirically difficult to determine. However, Locke (1991) also
suggests that some needs will be available to consciousness as evidenced by people planning in anticipation of needs. This issue is revisited and discussed more fully in section 2.3.

The Learning in Smaller Companies (LISC) project (Seagraves et al 1996) also identified the potential needs served by WBL from an organisational perspective, focusing on characteristics of companies who have participated or are participating in WBL projects. As one might expect, needs tended to be focused on the more 'extrinsic' orientated factors, namely: sustainability; survival; profitability; growth; diversification; meeting business/mission objectives. Indeed, reasons for organisations participation in LIP have been found to focus on increasing the competitive edge, enhancing flexibility and profit, motivating employees and enhancing the corporate image (CREATE 1996). However, some employers also wished the organisation to reach its fullest potential, in other words reach the self-actualising level of needs (Maslow 1987 - posthumous publication). Gray (1993) emphasises that small companies may not be growth-orientated, focusing more on survival and stability, thus motivation for WBL amongst organisations may be affected by organisational size.

However, it should be noted that the motivation for an organisation is generated from individuals working within that organisation. The impetus for participation in LIP, for example, may be from a single individual within an organisation, often called a 'champion'. These champions place a high value on education and training both in itself and the role that it has to play in long term company development. In some cases personal development of an employee takes precedence over short-term needs, as in the long term there are more beneficial effects for the company in terms of both a highly motivated, a more adaptable workforce and hence an improvement in overall company performance (Seagraves et al 1996). However, champions do not exist in all companies and for WBL projects to be successful the company must be committed to human resource development (Seagraves et al 1996).

Although the gaining of an actual qualification may be less important to the employer than the employee, those qualifications that are based in the workplace may be seen as more credible and hence receive more support from the employer than more 'generic' qualifications. This may be particularly the case when qualifications are quite specific, such as the provision of a management qualification specifically in Small and Medium Sized Enterprises provided by the LISC project.
Rapid growth companies need a range of skills that may not be present in their existing workforce and hence the company is faced with a number of choices including replacing or training their existing workforce, the latter being preferable. In these cases offering more specific educational courses may fill this gap in the educational market (Seagraves et al 1996). Furthermore, those companies facing intense competition will be looking to achieve a competitive advantage by taking opportunities for development. WBL projects may offer companies this competitive edge (Seagraves et al 1996). Additionally, WBL may simply offer an alternative to employers who are not satisfied with the existing traditional delivery of education (Seagraves et al 1996).

The LISC project provides useful insight into what factors might motivate employers and employees alike to take part in WBL, and indicates that there may be a certain degree of similarity between employer-employee categories. However, it may be important to compare and contrast the recognition of needs served by WBL between different levels within the organisational hierarchy. Dissonance between employer and employee needs may have an enormous impact on WBL success.

It should also be recognised that behaviour is underpinned by a combination of needs (Maslow 1987, Reid and Barrington 1997), and thus, most importantly, a variety of needs may be prominent in individuals undertaking the same learning opportunity (Reid and Barrington 1997). Indeed the strength of needs theories lies in their emphasis on the variety of individual needs and hence the potential complexity of motivation (Mitchell 1982, Schein 1988). Furthermore, it may not be realistic to consider needs as being totally fulfilled; rather there are varying degrees of need satisfaction (Maslow 1987 - posthumous publication).

Further, criticism focuses on the inability of needs theories alone to predict behaviour. Locke and Henne (1986) and Locke (1991) suggest that this may be because theories only explain the initial part of a more complicated process linking motivation to outcomes. Needs theories are not capable of explaining specific behaviours only why an individual has to or wants to act. Individuals with the same needs may not choose the same course of action to satisfy that need (Locke and Henne 1986). Landy and Becker (1987) support this proposal suggesting that needs theories can only explain satisfaction that a need has been fulfilled, and indeed this is all that we can reasonably expect of them. For example, the potential benefits of adult education have not
proved to be a successful predictor of participation versus non-participation in adults (Courtney 1992); non-participants recognising the same potential benefits of education as those who do participate, as indicated by Locke and Henne (1986). While theoretical implications and research findings indicate that WBL may address a variety of need categories this in itself is not sufficient to understand resultant behaviour. Hence there is a need to understand the progression of stages (figure 2.1) and how each stage aids our understanding of individual differences in behaviour.

2.2.1 NEEDS AND THE NATURE OF WBL

It is further proposed that the underpinning needs driving learning will have a fundamental impact on the nature of an individual’s participation in WBL. This was clearly expressed in Boshier’s (1977) theory describing adult learners as falling along a continuum from life-chancers to life-spacers (figure 2.5).

![Figure 2.5: The continuum of learner needs in relation to learning](image)

Figure 2.5. links the participation patterns of learning with needs underpinning that learning. Life-spacers, who participate in learning as a way of ‘expressing’ themselves, similar to ‘self-actualisers’, will be more likely to participate in a continual learning process. Each new learning experience will enhance motivation to develop further - to ‘grow’ - they are described as proactive learners (Boshier 1973). Life-chancers, who participate in learning to gain knowledge or skills in order to cope with social, psychological or vocational aspects of their lives, are more likely to participate in fragmented learning. They are motivated to participate in learning projects that fulfil a particular need, once this is fulfilled motivation decreases. These learners are described as reactive - they seek to remedy a deficiency or imbalance in their life (Boshier 1973). Indeed, McCombs (1991) also suggests that there will be two fundamental driving forces for LLL, competency/control akin to life-chancers and growth/development akin to life-spacers.
Boshier (1971) suggests that most adult learners will be life-chancers and hence learning will be fragmented. The notion that learning is a mechanism to aid coping with life transition stimuli is prevalent throughout adult education theories, and may explain the origin of the strength of different needs categories. Thus deficiency needs may stem from life transitions, whereas growth needs stem from an intangible intrinsic quality, which may be inhibited by attention to deficiency needs. Rubenson (1978), Cross (1981), Darkenwald and Merriam (1982) and Cookson (1986) all support the idea that adults participate in learning in reaction to life transitions and stimuli within their current environment. Stimuli may entail personal or work-related events (amongst others), which are periods of change demanding that the individual adjusts - a developmental task. Learning is an essential part of enhancing successful adjustment, and these transitional periods represent times when an individual is particularly sensitive to learning (Cross 1981). These stimuli vary in intensity and frequency (Darkenwald and Merriam 1982), and hence will dictate WBL participation rates. Career development theories (notably Super et al 1996) also stress the developmental nature of needs and the influence that learning has on the definition of needs.

Rubenson (1978) and Lazarus and Folkman (1984) stress the importance of the subjective perception of the stimuli, that is individuals will perceive similar stimuli in various ways, which will affect their reaction to those stimuli. Within an employee development context, Reid and Barrington (1997) focus more specifically on employee confidence in their existing ability, knowledge and skills - a lack of confidence stimulates the need to develop deficient areas. Indeed, Locke and Henne (1986) emphasise that an individual must appropriately perceive and identify the needs to be addressed before they can take appropriate action. Maurer and Tarulli (1994) found that individual perceptions of their needs was related to their level of interest and participation in LLL activities.

This opens the debate regarding the very nature of WBL - whether WBL is predominantly reactionary or proactive. The oft-quoted study of Aslanian and Brickell (1980) found that the majority (over 80%) of participation in adult education was triggered through some sort of life transition. However, Cross (1981) doubts that the proportion of life transition-triggered learning is as high as that suggested by the Aslanian and Brickell study, and cites as evidence Tough's (1968) earlier study, which found that approximately 33% of learning was triggered through life transitions. Indeed, Seagraves et al (1996) found that both professional advancement and
cognitive interest were prominent valued outcomes of WBL. In an organisational context, the accepted ‘training’ philosophy is one of ‘training needs analysis’, which develops instructional objectives and criteria (Tannenbaum and Yukl 1992). This approach lies approximately mid-way between purely reactive, fragmented learning and growth-orientated continuous learning. While stressing the importance of matching training and needs, the key element is still one of control and direction - organisation-led training. However, this is a trend towards better planning of training for future needs that supports the strategic direction of the organisation (Tannenbaum and Yukl 1992), hence a move towards the more proactive end of the learning continuum.

The importance of employee self-control in training and learning has also been recognised, and there is a trend towards more learner-orientated ‘training’ (Tannenbaum and Yukl 1992). Reid and Barrington (1997) stress the importance of ‘learning to learn’ - equipping employees with the tools necessary to enhance learning capability and encourage more diversification in the use of different learning modes, such as experiential learning. Goldstein (1986) and Noe and Schmitt (1986) have posited similar concepts. ‘Training’ should no longer be exclusively directed and controlled by the trainer, but emphasis should be placed on promoting a proactive continual learning process with stress on self-directed/managed learning, in line with LLL and WBL principles (Paxton 1976, McCombs 1991). As discussed in chapter one, the Investors in People (IIP) movement promotes a development strategy that seeks to enhance the ‘people’ element within organisations. Through the promotion of partnerships between employer and employee a new ‘mind set’ towards continuous development may be fostered throughout the organisation (CREATE 1996).

Reid and Barrington (1997) propose the promotion of a ‘continuous development spiral’ where employees ‘learn to learn’, that is learning becomes an integral force within their everyday lives. Central to this process is that employees must learn to have confidence in their own ability to grow and take responsibility for their own learning, which will promote the transformation from a reactionary to a proactive learner. Thus learning will be a continuous process, pre-empting future needs rather than purely reacting to environmental stimuli. Kinzie (1990) proposed a similar process and the literature further supports the utility of such a theory. Tannenbaum et al (1991) found that confidence was an important precursor to the successful application of learning. Implementation of IIP strategy has been found to increase employee confidence and initiative, and
promote a more cohesive team and positive atmosphere (CREATE 1996). This concept seems particularly important within the WBL context given the growing demand for marketable skills rather than a ‘safe, lifelong’ job. Indeed, Seagraves et al (1996) and McCombs (1991) have stressed the crucial importance of individual commitment to WBL, which entails employees adapting to this more proactive approach to learning. LLL philosophy demands empowerment of employees and a nurturance of individual inner potential to grow and develop (McCombs 1991). Furthermore, employers must reformulate their own approach in line with LLL philosophy, particularly focusing on employer-employee partnerships and organisational commitment to WBL (a point revisited in the next section). Thus it is important for employers and employees alike to change their perspective on learning in the workplace, encouraging proactive learning rather than a ‘fill in the gaps’ approach. Technological advances can support this change, for example, through individualised instruction (Tannenbaum and Yukl 1992). However, questions arise about how competent learners are at managing their own learning, particularly in relation to maintenance of motivation to learn and choices regarding learning opportunities (Kinzie 1990).

However, there will be an inevitable tension between organisationally specific needs for employees and employee self-development needs. Reid and Barrington (1997) suggest that a critical aim of any organisation should be to become a learning organisation, ‘which fosters and encourages the natural self-generating learning process’ (p. 94). The organisation may benefit from employees who are reflective and learn from their actions - but a situation may arise where their own needs compete with organisational goals. This emphasises the need to compare and contrast employer-employee needs and interactions. Pedler et al’s (1997) model of energy flow through the learning organisation demonstrates how individual development may complement organisational development (figure 2.6).
Communication processes aid the energy flow, for example the flow of information, motivation and resources. Pedler et al (1997) suggest that outcomes of the 'learning loop' (represented by the flow between ideas and action at the individual level) and the 'participating loop' (represented by the flow between individual ideas and organisational policy) can influence both operations and policy at the organisational level. In other words, Pedler et al (1997) are suggesting that the learning and interaction between employer and employee are seen as an integral part of organisational development. Integration of employer-employee development may be founded upon such processes as employer-employee consultation over identification of development needs and creation of PDPs in line with LLL philosophy (Paxton 1976). Indeed, Argyris (1999) emphasises that organisational learning begins at the individual level, it is not simply a case of changing organisational policy but encouraging employees to actively participate in the learning process.

2.2.2 HIERARCHIES OF NEEDS

A hierarchy/continuum debate exists that highlights the potential for individual differences in need or orientation. Not only is there potential variety in needs categories but also in strength of needs and in the combination of needs influencing an individual at any one time. Indeed, the concept of a hierarchy of needs has been questioned, particularly as research results often conflict as to the presence or absence of such hierarchies (McCormick and Ilgen 1987). Individuals may be
influenced by structurally different categories of needs based on individual differences in concept formation. Indeed, Maslow stressed that the hierarchy of basic needs may not be static across individuals, rather the cases that he studied showed a tendency towards a similar ordering of needs (Maslow 1987 - *posthumous publication*). Needs are seen as categories of stimuli in an individual's environment that are categorised according to various characteristics. It is reasonable to assume individual differences in concept formation using different categorisation rules (Landy and Becker 1987) hence these needs may be differentially categorised, therefore some individuals may have five levels of needs, others three or two. This process is akin to assimilation and accommodation (e.g. Piaget 1977) and is based on the dual cognitive abilities of inductive reasoning, permitting one to identify characteristics on which stimuli are arranged, and deductive reasoning, allowing one to place new stimuli in pre-existing categories. It is, therefore, suggested that needs categories may be individually rather than universally defined (Landy and Becker 1987, Schein 1988) and may be based on individual differences in:

- The number of categories formed by individuals;
- How these categories are arranged on an abstract-concrete continuum;
- How definitions and number of categories change situationally;
- How definitions and number of categories change developmentally (Landy and Becker 1987).

Hence, the importance of exploring how individuals perceive and categorise the needs addressed by WBL is greatly emphasised.

### 2.2.3 Summary

In summary, it is evident that there are many needs theories, however, they convey similar proposals that needs can be categorised into similar concepts, whether in two or more categories. However, these categories may be differentially perceived and categorised by individuals and it is important to establish the degree of similarity between individuals in perception of WBL needs. In addition, self-reported 'needs' served by WBL may be difficult to distinguish from 'values' and 'goals', an issue revisited in the next section (2.3). Furthermore, merely understanding needs is
Chapter 2 - Building a Motivation Framework

not sufficient to explain individual differences in behaviour - the same WBL opportunity may address a variety of needs. From an individual standpoint it is important to focus on the value that they place on learning. From an organisational standpoint it may be important to focus not only on the value placed on learning by the management team (such as the 'WBL champion' mentioned earlier), but also on resourcing issues. In both cases, recognition and value of learning opportunities are discussed in the next section. WBL may call for a reformulation of employer-employee partnerships, with an emphasis on congruent needs and commitment as important motivational elements (Noe and Wilk 1993). Implementation of the ilP standard has demonstrated the utility of such an approach, where employers and employees alike have gained real benefits (King 1995, Spilsbury 1995).

2.3 MOTIVATIONAL VALUES

It is suggested that values theories, perhaps the largest and least well-defined group of motivational theories, can further enhance our understanding of differences in an individual’s action. It is proposed that behaviour will be guided towards the fulfilment of needs based on individuals’ different hierarchies of values (Locke and Henne 1986, Maslow 1987 - posthumous publication, Locke 1991). There are three key distinctions to be made between values and needs.

- Firstly, values are not needs, they are vehicles to fulfil needs.
- Secondly, a value may serve a number of needs simultaneously, for example, a given value such as money may fulfil the need for food or the psychological status of having money.
- Thirdly, the same need can be satisfied by different values, for example, if two individuals are hungry one may choose to eat a ‘fast food’ whereas the other may choose to eat a ‘healthier option’ reflecting their value system, accounting for both ‘negative’ and ‘positive’ action (Locke and Henne 1986).

Needs provide the basis for understanding what an individual values, for example the need for self-actualisation may increase the importance of achievement.

Values have been defined as:
an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence. A value system is an enduring organisation of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance.

(Rokeach 1973, p.5)

what the individual acts to gain and/or keep .... They are what the individual considers good or beneficial. Values can range in content from basic moral values (right and wrong) to personal preferences for ice cream flavor.

(Locke and Henne 1986, p.3)

the 'desirable' (to be sought after) rather than the attained: as motivations for action, not accomplished object of desire in an instrumental sense.

(Coates 1993, p.28)

Thus values can be broadly defined as 'outcomes that people desire'. The previous section highlighted that studies of 'needs' served by participation in education and work tended to focus on 'valued outcomes' rather than on 'needs' themselves.

Values focus on what people want to achieve rather than whether they actually achieve that outcome (Ajzen 1988, Locke 1991). Values may guide choice of action but an action does not necessarily lead to successful or desired outcomes. The importance of distinguishing between behaviour and outcomes is further emphasised by the common themes running through various 'value' theories, which clearly treat outcomes and behaviours as separate concepts:

- The perceived value of an outcome (valence);
- The link between behaviour and outcomes (instrumentality);
- The importance of social behavioural norms;
• An individual’s perception that they can perform a behaviour (perceived behavioural control and/or expectancy);

Figure 2.7 demonstrates the theoretical links between these elements in the form of the Theory of Planned Behaviour (TPB), which provides a useful framework for this section combining these common elements.

Figure 2.7: Theory of planned behaviour (adapted from Ajzen 1988)

Despite its obvious correspondence with other work-related motivation theories and its strong research base, this theory has been largely ignored in the field of work motivation and participation in adult education (Courtney 1992, Arnold et al 1998). Locke (1991) names TPB as a major underpinning theory in his motivation sequence. Indeed, TPB has recently been applied with success in areas such as career development (Giles and Rea 1999). Similar frameworks have been suggested by adult education researchers, for example Rubenson (1978) and Cookson (1986). This model underlines the potential complexity in understanding values and their eventual impact on behaviour, and for this project serves as a useful organisational tool to explore the ‘values’ stage of the motivation framework. Indeed, in conjunction with Locke and Henne (1986) and Locke (1991), Ajzen (1988) also suggests that values by themselves cannot predict behaviour successfully. However, values represent an important link between needs and understanding subsequent intentions and goal setting, which in turn are more successful in predicting behaviour. Values help to explain why we choose certain course of actions (Ajzen and Fishbein 1980). Furthermore, the subjectivity of ‘values’ is underlined, and consequently the importance of
Individual perceptions of learning. We need to understand what an individual desires, what beliefs they hold, their attitudes and their perceptions of social norms (Pinder 1984, Ajzen 1988, Tannenbaum and Yukl 1992). Indeed, the need to explore such elements in understanding motivation in LLL has been emphasised (McCombs 1991).

2.3.1 Valence - Perceived Value of Outcomes of Performance

The concept of valence is a common theme throughout general and specific motivation theories in a variety of settings, including work and training (e.g. Vroom 1964, Porter and Lawler 1968, Rubenson 1978, Cookson 1986, Keller and Kopp 1987, Ajzen 1988, Klein 1989). Valence refers specifically to the perceived value, desirability or attractiveness of the potential outcome of performance; the outcome is only valuable if it has some relevance to the individual involved. Thus valence is based entirely on an individual's perception of potential outcomes and their anticipation of the attractiveness of such outcomes. A leading authority in motivational research supports this concept as valid, stressing that previous research has consistently demonstrated that people do attach different preference values to outcomes (Landy 1989). Indeed, understanding the relevance or importance of learning outcomes to the individual has been recognised as a key issue in the study of motivation in LLL (McCombs 1991) and AE (Howard 1989).

Outcomes may be valent because of their perceived expected ability to satisfy needs (Porter and Lawler 1968, Lawler and Suttle 1973, Pinder 1984). Indeed, Ajzen (1988) and Pinder (1984) stress that the valence of an outcome is a subjective belief held by an individual, regardless of the 'real' value of the outcome. Strategies to actively reinforce this concept have been suggested in both work and training motivation. Hackman and Oldham (1979) identified the importance of task identity and task significance as instrumental in promoting the 'meaningfulness' of work. More recently, Keller and Kopp (1987) stress that in the early stages of instruction trainers must ensure that trainees understand the objectives of training and the relevance of such objectives to themselves; instruction should be matched with trainees' own goals. The use of concrete, familiar language and examples that relate to learner values are advocated to facilitate learners' understanding of relevance to themselves. Tannenbaum and Yukl (1992) highlight the need for trainee participation in development need analysis, as this may increase the relevance of development to individuals and ultimately increase overall motivation to learn. Furthermore, Noe
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(1986) suggests that where trainees perceive evaluation of their strengths and weaknesses (i.e. developmental needs) to be accurate they are more likely to be motivated to participate in learning. Trainee evaluations of the utility of developmental opportunities may concurrently impact on trainee motivation to learn (discussed in the instrumentality section 2.3.2). This proposition is supported by research findings that when trainees perceive developmental needs as accurate (relevant to themselves) their motivation to apply learning is increased to a greater extent than pre-training motivation to participate in learning (Noe 1986).

Career development theories suggest that appraisal of learning opportunity outcomes may be based on the centrality of work to identity and the desire for upward mobility (London 1983). Indeed, Lazarus and Folkman (1984) stress three principle outcomes when individuals appraise the importance of stimuli to themselves (primary appraisal) - stimuli can be classified as irrelevant, benign-positive or stressful (harm, threat and/or challenge). The outcome of appraisal will have an important influence on whether an individual acts or not. However, it should be noted that whilst positive valence perceptions may be proportionally related to behavioural outcomes, negative valence perceptions have been found to have a uniform relationship with behavioural outcomes (Pinder 1984).

The number of values held by an individual is potentially infinite, however, a review of several well-known theories highlights the similarities in general categories of values, and provides a general framework for understanding the types of values that drive employees towards action. These categories can be seen in a comparison of theories given in table 2.5.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>Achievement or Advancement</td>
<td>Advancement</td>
<td>Improvement and Innovation</td>
<td>Career movement</td>
</tr>
<tr>
<td>Power</td>
<td>Responsibility</td>
<td>Dominance of others</td>
<td>Authority</td>
<td>Prestige</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Assertiveness</td>
<td>Self-confidence</td>
</tr>
<tr>
<td>Affiliation</td>
<td>Recognition</td>
<td>Recognition</td>
<td>Autonomy</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.5: Similarity in value concepts

Although some of these theories are traditionally viewed as needs theories, it is argued that achievement, for example, is not a need in its own right, rather it serves to fulfill a more
fundamental need, e.g. esteem. Indeed, Herzberg (1968) identified a need for 'psychological growth' that could be addressed through the 'motivators', that is, they are part of the process of need fulfilment not needs in their own right. It is important to distinguish between the value of autonomy (‘power over oneself’) and dominance (‘power over others’). Such factors as autonomy/self-determination and competence may serve esteem needs, as Maslow (1987) emphasised, the role of competency and freedom are key issues in bolstering an individual’s self-esteem. Other categories have been identified namely cognitive interest (Boshier and Collins 1983, Seagraves et al 1996, Guest and Conway 1997), social welfare (Boshier and Collins 1983, Shamir 1990), pay (Noe 1986, Guest and Conway 1997) and location/environment (Guest and Conway 1997). The diversity in ‘values’ categories suggested amongst theorists and researchers indicates that ‘values’ can range from intangible concepts, such as ‘recognition’, to tangible concepts, such as ‘money’. Such outcomes may be valued for their ability to address not only basic needs but also cognitive and aesthetic needs. It is likely that behaviour may help to achieve several valued outcomes. For example, team working may benefit both the collective, through increased production, and the individual, through social acceptance (Shamir 1990).

Similarly, career orientations have also been identified, where occupational choice may reflect an inherent interest or 'orientation' of the individual (Holland 1973, Spokane 1996). Table 2.6 presents the six categories postulated by Holland (1973).

<table>
<thead>
<tr>
<th>Type</th>
<th>Person Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realistic</td>
<td>Seeks objective, concrete goals and tasks</td>
</tr>
<tr>
<td></td>
<td>Likes to manipulate things</td>
</tr>
<tr>
<td>Conventional</td>
<td>Follows rules and selecting goals approved of by society and customer</td>
</tr>
<tr>
<td>Social</td>
<td>Interpersonal skills and interest in other people</td>
</tr>
<tr>
<td>Enterprising</td>
<td>High energy, enthusiasm, dominance and impulsiveness</td>
</tr>
<tr>
<td>Investigative/</td>
<td>Ideas, words and symbols are important</td>
</tr>
<tr>
<td>Intellectual</td>
<td>Tasks requiring abstract and creative abilities</td>
</tr>
<tr>
<td>Artistic</td>
<td>Uses feelings, intuitions and imagination to create forms and products</td>
</tr>
</tbody>
</table>

Table 2.6: Holland’s career orientations (adapted from Handy 1993, p41)

These orientations range from the more concrete (extrinsic) through social (interactive) to more abstract (intrinsic) orientations, which in turn may affect an individual’s orientation to WBL. These
orientations may have important implications for the sort of environment within which an individual will flourish or falter, emphasising the importance of person-environment fit.

The value of achievement has been described as the most important type of motivation in formal education (Slavin 1991). A person who highly values achievement may work at a task longer than those for whom achievement holds lesser importance, often not being perturbed by failure, which only leads them to exert more effort to succeed (Slavin 1991). Although some individuals may be more motivated to avoid failure than seek success (Atkinson 1964), which may be related to the maintenance of a positive self-image (Slavin 1991). However, studies in career development, adult education and WBL suggest that a multiplicity of values may be perceived as beneficial outcomes of learning in the workplace (Boshier and Collins 1983, Duarte 1995, Seagraves et al 1996). Thus the exploration of values in relation to WBL must take a wider perspective of values than more traditional formal education. Indeed, it has been recognised that there is little evidence to suggest that individual's are motivated by one value, rather several values will be influential in the motivation process at any one time (Locke and Henne 1986, Ajzen 1988).

Furthermore, it should be noted that participation in learning might lead to the development of other values, for example personal self-development, in addition to the valued outcomes initially pursued (McGivney 1993). This highlights the importance of experience in influencing values, in line with adult education theories (e.g. Darkenwald and Merriam 1982), career motivation and development theories (e.g. London 1983, Super et al 1996). Furthermore, London (1983) emphasises that outcome expectations should be realistic for the maintenance of career motivation and subsequently successful development. Experience may play an important role in forming realistic outcome expectations.

There is evidence to suggest that the values held by an individual may vary according to career stage. At career onset, employees may value work that provides variety, economic benefits, social contact and lifestyle improvements (Ruiz-Quintanilla and Wilpert 1990, Duarte 1995), i.e. more materialistic and social values. In mid-career the values of autonomy and creativity have been found to increase in importance, whereas values such as the opportunity for achievement, advancement and exercising of their abilities may be stable across much of an individual's career (Duarte 1995). In later career stages, a sense of duty, aesthetics, altruism, authority, prestige and
risk have been found to increase in value (Ruiz-Quintanilla and Wilpert 1990, Duarte 1995). Similar patterns have been found in voluntary adult education studies, where younger adults and male employees stated learning for more employment-related reasons than older adults and female employees, who participated in voluntary adult education for more intrinsic reasons (e.g. personal satisfaction, self-development, leisure purposes) - (McGivney 1993). Job advancement and self-improvement are common values expressed by participants in adult education (Beder and Valentine 1990). These values are reflected in the valued outcomes individuals expect to gain from WBL discussed earlier in section 2.2 (page 34) - (Seagraves et al 1996).

Furthermore, individual characteristics have been proposed as influential in AE participation in adult education, for example, socio-economic group biases (Courtney 1992). That is, certain groups may not perceive education to be a viable and accessible option to them. Houtkoop and van der Kamp (1992) suggest that the relationship between SES and participation in AE may be explained by the consistent relationship found between initial educational experiences and participation in AE. That is, those in lower socio-economic groups may be liable to receive poorer education and these experiences may impact on further participation in developmental activities. However, Boshier and Collins (1983) found that of those actually participating in AE, lower SES was associated with higher scores on professional advancement, social stimulation, social service, social contact and external expectations. Higher SES was associated with higher ratings on cognitive interest. Thus SES biases may influence why learning is seen as valuable and what outcomes are focused on rather than simply lowering participation rates.

Boshier and Collins (1983) also found that men were significantly more inclined than women to enrol for social contact, social stimulation, professional advancement, social service and external expectations. Women were more likely than men to enrol for cognitive interest. However, it is reasonable to assume that such biases are likely to have changed over the past 15 years. Further, Tannenbaum et al (1991) found that motivation after training was higher for females.

Younger participants in AE were more inclined to enrol for social contact, social stimulation, professional advancement, social service and external expectations. Older adults were more likely to enrol for cognitive interest. Indeed, Tannenbaum and Yukl (1992) suggest that older employees may have different needs to new employees and retraining of mid-career candidates.
This seems reasonable as findings have suggested that different age groups value different outcomes as their career develops (Duarte 1995). Furthermore, marital status may have a role to play in LLL participation, although this is not explored (Livneh and Livneh 1988).

### 2.3.2 Instrumentality - Action as Instrumental in Achieving Outcomes

Instrumentality is also a common theme through motivational theories (e.g. Vroom 1964, Porter and Lawler 1968, Rubenson 1978, Cookson 1986, Noe 1986, Keller and Kopp 1987, Ajzen 1988), referring to the concept that an action must be perceived (a subjective appraisal) as instrumental in achieving a valued outcome. Instrumentality is an important concept in understanding why one action or resource would be chosen over another. Indeed, Lazarus and Folkman (1984) identify a mechanism for this process called 'secondary appraisal', where individuals evaluate what might be done (appraisal of internal and external resources) and the expected success of coping options. Bandura (1982) refers to this process as outcome expectancy. London (1983) stresses the importance of individuals realistically evaluating both their internal and external resources. This is particularly important as instrumentality is still a belief based on an individual’s own perceptions and experiences. Performance may not be instrumental in achieving a desired outcome in reality, what is important is that the individual believes that behaviour will lead to 'reward' (Ajzen 1988). A similar concept was proposed by Rokeach (1973), who distinguished between instrumental values (modes of conduct) and terminal values (end-states of existence), where modes of conduct are instrumental in attaining terminal values.

These proposals indicate that WBL must be viewed as instrumental in achieving 'valued outcomes'. Indeed, 'training motivation' has been found to be a product of training expectations (Latham 1989). This concept has been identified earlier in adult education research, where Rubenson (1978) theorised that an individual must expect that education will have certain desirable consequences. In instructional design, Keller and Kopp (1987) proposed that the utility of training in achieving objectives should be demonstrated to trainees, training must be seen as a valid resource for achieving successive outcomes, a view subscribed to by Noe (1986). Tannenbaum et al (1991) found that 'training fulfilment' - the individual's value of training as a useful resource that will achieve desired outcomes - is an essential element of motivation to learn, ensuring maximum benefits are derived from training. Indeed, Grotelueschen and Caulley (1977)
found that in Continuing Professional Development (CPD) the perceived efficacy of further education or training was an important factor in understanding eventual behaviour.

It has been suggested that learning may increase in value or importance for younger employees because of the future lack of employment stability and the need for transferable skills. Thus younger employees have been found to be more willing to learn and retrain (Ruiz-Quintanilla and Wilpert 1990). The organisation may have a vital role to play in influencing an individual's perception of WBL as useful, a point discussed in the sections on 'social behavioural norms' (section 2.3.4.) and 'goal setting' (section 2.4). Particularly as training experiences has been found to impact on post-training attitudes towards learning (Tannenbaum et al 1991). It is therefore essential to assess individual perceptions of WBL and its importance in the motivation process, particularly as there has been limited research in this area (Tannenbaum and Yukl 1992).

This stage in the motivation process demands that individuals consider choices and associated costs and benefits for achieving desired outcomes. It has been suggested that the complex level of information processing demanded by this evaluation might be hindered or influenced by several factors: the positive or negative nature of outcomes; the number of alternative outcomes; cognitive ability (Landy and Becker 1987). There may be a positive linear relationship between positive outcomes and behaviour although the strength of negative outcomes may be irrelevant as behavioural outcome may be the same for all levels of negativity (Pinder 1984, Landy and Becker 1987). Further, the number of available outcomes may hinder information processing, as the number of outcomes may lead to over-simplified processing techniques. The choice of information processing techniques may be based on the number of outcomes, the valence of outcomes and level of individual cognitive ability and that demanded by the environment (Landy and Becker 1987). Klein (1989) suggests that scripted responses to familiar tasks may aid this process through parallel processing.

Although instrumentality is traditionally defined as linking one outcome (usually performance) to another outcome (value), it is more likely that a series of outcomes are linked together (Rokeach 1973, Pinder 1984, Klein 1989). Thus it is important to differentiate between different levels of outcomes, a level one outcome would be defined as successful performance of a behaviour, a second level outcome would be defined as the value an individual is trying to achieve and so on.
(Pinder 1984, McCormick and Ilgen 1987), which has been highlighted as a neglected aspect of research (Locke et al 1981). Progression and development of sub-goals may have knock on effects for all sub-goals linked within the chain in terms of valence, definition and difficulty level (Klein 1989). In terms of the current framework, the ultimate ‘outcome’ would be the foundation need(s), however, it may be difficult to assess this as it could be at a fifth or six level outcome.

<table>
<thead>
<tr>
<th>First level outcomes</th>
<th>Second level outcomes</th>
<th>Third level outcomes</th>
<th>Fourth level outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass exams</td>
<td>Diploma</td>
<td>Achievement</td>
<td>Esteem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employment</td>
<td>Safety</td>
</tr>
</tbody>
</table>

Figure 2.8: The instrumentality chain - Linking performance, valued outcomes and foundation needs

Figure 2.8 illustrates the potential complexity in linking outcomes using a hypothetical example, where each outcome is linked to another through its perceived instrumentality to achieve successive outcomes. Initial outcomes gain their valency through their perceived connections with successive outcomes, the instrumentality being based on perceived probability that one event will lead to another (Pinder 1984). Thus the various aspects of ‘job values’ identified through different theories may be sorted according to their respective level within a series of outcomes. For example, the successful outcome of challenging/competitive work (e.g. Herzberg 1968, Miner 1978) may be first in a series of outcomes, involving achievement (e.g. McClelland 1961) and eventually esteem (e.g. Maslow 1987). Goldstein (1991) advocates the existence of the instrumentality chain in training situations, and stresses the need to link training to subjectively valued outcomes in order to enhance individual motivation.

A number of instrumentality chains may compete for an individual’s attention (Klein 1989), for example WBL may compete with daily work tasks. Klein (1989) suggests that scripts for familiar tasks may aid parallel processing of several chains. However, action may usually be directed towards the most salient outcomes for the individual. This has implications for WBL as, given
conflict between achieving work tasks and WBL goals, work tasks are liable to take precedence in everyday work life. Organisations should be cognisant of such conflict and try to resolve such situations by dovetailing WBL with work tasks.

The concept of instrumentality chains is helpful in understanding the link between employer-employee outcomes from participating in WBL, that is, the initial benefits to employees may be perceived by organisations as instrumental in achieving organisational benefits. Such a pattern has been observed in studies of WBL (Brennan and Little 1996, Seagraves et al 1996). For example, a series of reciprocal benefits were identified by Seagraves et al (1996):

- Self-development and career advancement related to increased performance, introduction of new skills and ideas into the workplace, enthusiasm that may motivate other members of staff;
- Qualifications may be related to an increased public profile;
- Being valued by employer may increase loyalty;
- There may be an overall increase in motivation within the job as a result of learning new ideas and a feeling of refreshment leading to increased employee performance;
- May cause revolutions within the workplace - where current systems and practices are questioned as a result of learning - good if gone about in the right way - poor if established in a confrontational way;
- More motivated to advance may result in power struggles and healthy competition.

However, there is also the potential for an employee, once better qualified, to leave the organisation and a possible need to build protective clauses into employee contracts has been identified, for example regarding paying fees if an employee leaves within a certain time frame. Furthermore, employees would expect to benefit from a successfully performing organisation, thus the employer-employee outcomes of WBL are reciprocal. Hence learning can be seen as an instrumental resource in a chain of valued outcomes, highlighting the need to focus on the perceived value of WBL and the outcomes connected to it.
TPB suggests that attitudes towards behaviour are a product of the two core beliefs of valence and instrumentality and form part of the force in motivation to learn, which has been highlighted by research in training (Tannenbaum et al 1991). Such mechanisms may therefore aid understanding of the formation of attitudinal dispositions towards learning indicated by Cross (1981) and Cookson (1986).

2.3.3 EXPECTANCY

It has been recognised that there is a need to explore individual perceptions of ability to successfully perform a behaviour (Vroom 1964, Bandura 1982, Pinder 1984, Locke 1991, Tannenbaum and Yukl 1992). According the Mitchell's (1974) original model, expectancy is very important in the ultimate decision to act, where it is suggested that the power of the overall perceptions of valence and instrumentality is tempered by expectancy perceptions; expectancy must be positive to stimulate effort. The importance of individual beliefs that a successful behaviour is attainable, i.e. having confidence in ability, has been particularly emphasised in the training literature (Noe 1986, Keller and Kopp 1987, Goldstein 1991, Tannenbaum et al 1991). Indeed, this has been identified as a key issue in the 'learning to learn' cycle proposed by Reid and Barrington (1997) and hence in the promotion of a proactive learner. Keller and Kopp (1987) suggest that training programmes should provide opportunities for practice and feedback channels that encourage individual's to attribute successful development to themselves. Furthermore, Rubenson (1978) recognises the need to understand expectations about being able to both participate (i.e. that opportunities are available and organisational policy supports development) and complete developmental opportunities. Individuals must, therefore, believe that opportunities for development are present and that they can successfully participate in WBL as a development tool. Indeed, Tannenbaum and Yukl (1992) highlight the importance of self-efficacy in training, the belief that the individual can master training successfully, particularly as this has been found to increase resiliency when obstacles are encountered (Marx 1982) as predicted by London (1983).

Ajzen (1988) and Lazarus and Folkman (1984) propose that individual perceptions of the degree of difficulty of performing behaviour (perceived behavioural control) or the belief in the likelihood that coping strategies can be applied (secondary appraisal - efficacy expectancy) is based on the individual's beliefs about the efficacy of available resources (i.e. instrumentality). Such beliefs
may well be based on past experience of success and perceived obstacles or support (Lawler and Suttle 1973, Pinder 1984, Ajzen 1988). Thus individual perceptions of ability to successfully participate in WBL may be influenced not only by their self-perceptions but also by their perceptions of environmental conditions. An organisation's role in influencing WBL expectations can, therefore, not be underestimated, a point clearly emphasised in the previous section. Indeed, Cohen (1990) found that supervisory support not only directly influenced ultimate 'motivation to learn' but indirectly affected 'motivation to learn' through effects on instrumentality and expectations. Furthermore, Mathieu et al (1992) found that perceptions that the environment was lacking in time, resources and other essential support led to diminished 'motivation to learn' (expectancy, valence and instrumentality) and hindered training effectiveness.

In addition, Shamir (1990) suggests that an individual may also evaluate 'perceived collective efficacy', i.e. the perception that the team/organisation as a whole can achieve desired outcomes. Such judgements may be based on leadership quality, power base, cohesiveness and structure efficacy. An individual may feel that they will be ineffectual if the organisation as a whole is perceived as lacking in efficacy. Thus organisational WBL strategy may play an important role in the formation of individual appraisals of WBL. If the organisational strategy is seen as ineffective, WBL participation and effort may well be diminished regardless of the appraisal of their own ability to achieve goals.

2.3.4 Social Behavioural Norms

A number of researchers propose that subjective norms are a necessary and important consideration in understanding an individual's intention to act (Rubenson 1978, Mitchell 1982, Ajzen 1988, Klein 1989, O'Reilly 1989, Ruiz-Quintanilla and Wilpert 1990, Shamir 1990). This factor is typically neglected in traditional expectancy models (e.g. Vroom 1964), indeed, the individual bias of motivational theories have been criticised for the inability to account for individual attachment to the organisational goals and behaviour that is beneficial for the 'team' rather than the individual (Coates 1993). In tandem with an individual's attitude towards a behaviour, considerations regarding the perceived degree of social pressure to behave should, therefore, also be taken into account (Ajzen 1988, O'Reilly 1989). This perception may be influenced by two core beliefs:
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- What the normative behaviour is perceived to be in a particular situation (i.e. what is the expected behaviour);

- The individual's relative degree of motivation to comply with that norm.

Although the relative weights that attitudes and subjective norms have in forming intentions has been found to vary across diverse situations (Ajzen 1988), the inclusion of this factor recognises that individuals do not behave in isolation but constantly interact with the world around them. Indeed, Feldman (1984) emphasises that group norms are generally enforced to promote group survival, to regulate group behaviour in order to avoid embarrassing or unexpected behaviours and to clarify the group's identity. Norms are a particularly important concept in the workplace, firstly, as in general co-operative working patterns are essential for effectiveness in the workplace, and secondly, that the potential fundamental need for social affiliation makes us sensitive to the demands of others (West 1999).

McGivney (1993) emphasises the need to distinguish between the Normative Referent Group (NRG), that is the social and cultural group that an individual belongs to, and the Comparative Referent Group (CRG), that is the social group the individual may aspire to belong to. If the NRG or CRG have prevailing positive orientations towards learning then this is likely to increase the individual's perceived value of learning (Darkenwald and Merriam 1982, McGivney 1993). Indeed, Rubenson (1978) stresses the importance of the individual's perception of the environment (i.e. the values of referent groups) in understanding participation in voluntary adult education. In addition, McClelland (1961) suggested that needs were learned or acquired through an individual's social and cultural experiences. A number of social mechanisms may reinforce group norms, for example explicit statements by supervisors, critical events in the group's history and past experiences within other groups (Feldman 1984). Thus pressure to participate in WBL may be socially as well as intrinsically driven.

Feldman (1984) suggests that norms reflect the central values held by a group. More specifically, the workplace acts as an important 'social and cultural group', which has its own set of organisational values, defined as:
part of the cognitive substructure of culture. Values are intimately connected with moral and ethical codes, and determine what people think ought to be done. Individuals and organisations which value honesty, integrity and openness consider that they (and others) should act honestly, openly and with integrity because it is the right thing to do.

(Brown 1995, page 21)

Shared values are essentially translated into organisational norms about what are appropriate or inappropriate attitudes and behaviour, forming 'socially created standards' (Schwartz and Davis 1981, O'Reilly 1989). Thus O'Reilly (1989) stresses that norms may be important for the development and maintenance of organisational behaviours. The sharing of organisational values throughout the workforce may be a key issue in its successful operation, with the potential to influence a plethora of factors such as production and staff turnover through its influence on commitment to goals and behaviours (O'Reilly 1989, Brown 1995, West 1999). Lynn (1997) stresses that relevance of learning outcomes is not only important at an individual level but also at an organisational level, where a 'shared vision' within the team regarding the relevance of learning underpins organisational learning. The negative impact of conflict on organisational value may focus on communication and co-operation either between departments or organisations (O'Reilly 1989).

The strength of organisational values is dependent on two dimensions (O'Reilly 1989, Shamir 1990). Firstly, the 'intensity' or the degree of approval or disapproval attached to an expected behaviour. Secondly, the 'crystallisation' or the degree of consensus among organisational members regarding the set of behavioural norms, that is the extent to which the norms are 'shared'. A high level of intensity and crystallisation are needed for a strong culture (O'Reilly 1989, Shamir 1990). Where values are not 'shared' conflict and micro-cultures may arise (O'Reilly 1989). In addition, it should be noted that as organisations develop so the associated culture is subject to change, culture itself is dynamic (Schein 1988), hence values would be expected to change and develop over time.

Organisational values may centre on similar categories to individual values, such as adaptability, autonomy, creativity and rationality (Brown 1995). However, more general social norms may exist
that focus on interaction patterns, such as co-operation, reciprocity, social responsibility, equity/fairness, honesty and moral reasoning, or more specific norms may focus on the sharing of information or work tools (Shamir 1990, Brown 1995). The potential influence that an organisation may have on an individual's perception of the utility of WBL was highlighted earlier, the extent to which organisational values promote WBL may therefore be an important issue, just as organisations may affect the value of training (Tannenbaum and Yukl 1992). As mentioned earlier, the perceived value placed on learning by the organisation may depend on the perceived instrumental links with organisational outcomes.

**Organisational Socialisation Process**

The organisational socialisation process is particularly important, where an employee learns the values of the organisation in order to become an effective member of the group (Super and Bohn 1970, Sanders and Yanouzas 1983, Pratt and Kleiner 1989, Brown 1995). The systems used to promote organisational values may be formal and informal. Formal processes focus on induction, training and mentoring systems, whereas informal processes may operate through 'stories' and jokes told by co-workers (Brown 1995). Communication, whether verbal or behavioural, is a vitally important factor in transmitting values throughout the workforce as employees learn from the messages and behaviour of others what is the expected behaviour and what is important (Pratt and Kleiner 1989, Brown 1995). The guiding belief or 'vision' needs to be communicated effectively by top-level management and 'shared' with those lower down the communication chain (Peters and Waterman 1982, O'Reilly 1989). To be effective, that is, values are adopted by employees, this communication must also come from a credible and consistent source, where management commitment and enthusiasm for organisational values must be visible through action as well as words (O'Reilly 1989, Pratt and Kleiner 1989). However, communication of organisational values is not totally in control of top-level management, the influence of 'stories' told among co-workers, i.e. in informal networks, also has an important role to play (O'Reilly 1989, Cohen 1990). Indeed, this informal source may be more influential than formal sources as the message is delivered in a more personal manner and in ways that the individual is more likely to remember (e.g. use of humour) (Brown 1995). The importance of communication is embedded in all aspects of organisational behaviour. Indeed, the co-ordination of work within and between organisations is impossible without effective communication (Wafa et al 1996, Bennett 1997).
Good communication can also benefit the individual through promotion of team spirit and enhanced job satisfaction (Bennett 1997), which in turn will impact beneficially on the organisation.

Most recently communication has been proposed as an essential factor in promoting an organisation's capacity for adaptation, innovation and efficacy (Spaeth 1995, Gephart et al 1996, Haskins 1996, Moenaert and Caeldries 1996), the cornerstone goals for lifelong learning and learning organisations. Indeed, a lack of communication throughout the organisation may be an influential factor in the failure of organisational learning (Schein 1996). Furthermore, communication skills have been proposed as important elements to encourage employee empowerment, a pre-requisite for successful organisational learning (Trotman 1996). Thus communication is not only important for organisational survival but also for promoting lifelong learning and a culture of learning organisations. Involving employees in organisational processes and improving communications can help implement organisational cultural change in approaches to work (Beardwell and Holden 1997). However, communication may also be used as a vehicle for control within organisations (Beardwell and Holden 1997) - not only controlling the passage of information but also access and avenues of open expression for employees. All levels of employees should be well informed (Brown 1995), particularly in WBL where employees take responsibility for learning and organisations need to provide appropriate guidance. Furthermore, communication does not just convey factual information but also intangible information such as recognition and appreciation, which in itself can enhance the motivation of the workforce (Wiley 1997).

The training and learning environment are important in the socialisation process, particularly 'socialisation to learn' where employees are orientated towards learning through emphasis on learning-associated norms (Sanders and Yanouzas 1983). In terms of LLL, such 'learning' norms may include taking responsibility for development and open communication. Indeed, the training literature highlights the importance of the pre-training environment in influencing employee perceptions of training usefulness and importance, that is, the employee 'learns' about the organisational value of training. The provision of support, resources and post-training follow-up signals the importance of training to the individual (Feldman 1989, Tannenbaum and Yukl 1992), and indicates that the organisation values their employees (Tannenbaum et al 1991). Supportive supervisors who discuss training goals with the individual also positively influence employee
perceptions, sending the message that training is useful and increasing an individual's motivation to interact with training (Cohen 1990). Indeed, employer support for WBL has been identified as a key factor in promoting and maintaining employee participation (Naish 1995). Thus the organisational learning environment may promote the credibility and validity of WBL by: communicating an employer's commitment to WBL from 'the top'; resourcing learners appropriately; making WBL opportunities explicit; and by cultivating an ethos and culture that respects learning and is 'ready to learn' (Brennan and Little 1996, Work-Based Learning Network 1996).

In addition, Albert and Silverman (1984) suggest that focusing on management development is a vital factor in the transmission and maintenance of organisational values, particularly improving manager credibility as a communicator and promoter of values. Where there is a lack of consistency between what top management say and what they do, there is great potential for confusion, distrust and cynicism throughout the organisation (O'Reilly 1989, Brown 1995). Thus what has been termed the 'lip service disaster' may arise, where perceived or real contradictions between management words and action lead to non-adoption of organisational values and the potential for a poorly functioning organisation (Pratt and Kleiner 1989). This underlines the importance of the manager's role in the transmission of values. Furthermore, training itself should be congruent with the values promoted by an organisation, for example an organisation that purports to value professionalism and quality may contradict this through presentation of substandard courses (Brown 1995). Training is, thus, highlighted as playing a very important role in the promotion of organisational values as long as it sends clear and consistent messages (Brown 1995). The implications for WBL are twofold, firstly, the organisation may greatly influence an individual's perception of the usefulness and importance of WBL, secondly, WBL may be an important vehicle for transmitting and maintaining organisational values.

An individual's motivation to comply with social values may rely on the valence attached to social rewards or sanctions (Shamir 1990). The salience of social rewards may be understood from the strength of an individual's affiliation needs (the fundamental need to belong) or the need for approval or reassurance. Alternatively, avoidance of conflict and maintenance of good working relationships in the workplace may result from the tangible need to preserve sources of support rather than more emotionally orientated needs. Indeed, Ajzen (1988) suggests that the relative
influential strength of perceived social norms versus individual attitudes on behaviour may differ across situations. However, Shamir (1990) suggests that there is a difference between an individual merely complying with a social value and actually internalising that value into their own value system as 'internal evaluative standards' (Bandura 1986). Indeed, O'Reilly (1989) distinguishes between mere compliance and commitment to organisational values. He describes a three-stage internalisation process moving towards real commitment to organisational values: compliance; identification; internalisation. During compliance an individual follows rules and regulations purely for self-interest. During identification an individual accepts social rules in order to maintain a 'satisfying, self-defining relationship', where they may feel proud of belonging to the organisational group. During internalisation the values of the organisation are themselves intrinsically rewarding and congruent with personal values.

Thus this internalisation process may also represent an important mechanism of interaction between social norm beliefs and an individual's valence and instrumentality beliefs. In terms of WBL, the Reid and Barrington (1997) model of continuous development would advocate an individual internalising the value of WBL and continuous development and becoming a proactive learner through real commitment to WBL. However, the potential impact of organisational values in the promotion or hindrance of the internalisation and commitment process may be dramatic. For example, poor organisational provision and promotion of WBL may eventually jade an individual's perception of WBL. Conversely, good organisational provision and promotion of WBL may accelerate the 'learning to learn' process and internalisation of WBL as an important value, leading to the adoption of a proactive learning stance. Although the impact of organisational values must be assessed in comparison to the individual's existing attitudes, that is, an individual may already value WBL, what is important is the relative interaction between organisational and individual values. In practice, Tannenbaum et al (1991) found a cyclical relationship between training (of good quality) and employee commitment - training strengthened employee commitment to organisational goals, increased effort and a sense of organisational membership, which in turn positively impacted on individual perceptions of training and the effectiveness of future training.

The process of internalisation may take a great deal of time, based on an individual's experiences of gaining expected rewards and outcomes. Thus management may play an important role in
reinforcing values over time (O'Reilly 1989), hence the importance of management training towards maintaining the instrumentality of WBL. Indeed, the level of employee involvement (involvement, flexibility and communication), perceptions of fairness, trust and delivery of promises has been found to have an effect on employee commitment (Guest and Conway 1997). Furthermore, promoting internalisation and commitment to a set of organisational values is inextricably linked to the organisational socialisation processes emphasising the importance of informal communication processes (Pratt and Kleiner 1989, Shamir 1990, Brown 1995).

**Self-Interest Versus Prosocial Behaviour**

It has also been suggested that there is a need to distinguish between work behaviour purely focused on self-interest (hedonism) and prosocial work behaviour, as many motivation theories focus on the former rather than the latter (Vecchio 1981, Shamir 1990). Thus the process of internalising values such as co-operation, reciprocity and social responsibility may represent a core factor in the transition from self-interestedness to collectivistic behaviour (concern for self and others) - (Shamir 1990). Vecchio (1981) points to the importance of understanding such behaviour from the perspective of individual moral development, the extent to which an individual recognises and values the perspectives of others. In particular two similar developmental theories may be relevant here, Kohlberg (1976) in relation to moral development and Eisenberg (1986) in relation to prosocial reasoning.

At initial stages an individual may merely comply with social norms purely for self-interest, an individual is aware of social rules and regulations but interprets them in terms of hedonistic consequences of action. During middle stages an individual accepts the influence of others through a desire to fulfil the expectations of others, gain approval and maintain interpersonal relationships. There is an acceptance and appreciation of somebody else's perspective. Particularly strong values at this time may be trust, loyalty, respect, gratitude, maintenance of mutual relationships, doing one's duty, following rules and respecting authority. At final stages, rules and regulations are seen as important ways of ensuring fairness, standards are internally driven rather than relying on social direction, hence values are evaluated and subject to change by the individual. At these final stages self-respect is highly valued, indeed, Shamir (1990) suggests that the intrinsic reward of prosocial behaviour is a heightened feeling of self-worth. Vecchio
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(1981) suggests that moral development may be an important moderator in understanding the values directing behaviour, whether behaviour is hedonistic or prosocial in origin. High levels of moral development imply a high regard for the feelings and dignity of both yourself and others. Vecchio particularly focused on the value of equity, suggesting that for those who are more morally mature equity would have a high valency, for those who were more morally immature equity would have low valency. Alternatively, equity may be valued for self rewards by immature individuals and valued for moral judgement by mature individuals. Indeed, Shamir (1990) proposes focusing on an individual's moral and calculative 'motivations' simultaneously to more fully understand behaviour.

This debate poses questions for the values attached to WBL. The literature is dominated by studies of the value of learning for employees from a self-interest perspective. However, given the reciprocal benefits of WBL for employee and employer alike, the motivating value of benefits to the organisation as a whole may play a differential role for each individual based on their prosocial tendencies. On this basis organisations would benefit from encouraging commitment and internalisation of organisational values. It has been found that generally the majority of adults operate within the middle stages of moral development, where judgements are based on social rules or norms rather than purely self-gain (Colby et al 1983). However, O'Reilly (1989) suggests that a typical employee in a workplace scenario may actually operate at the initial stages relating to self-interest. That is there is little commitment to organisational values beyond the fair exchange of effort for reward (e.g. financial or status). Perhaps this is to be expected in the workplace where there may be little personal attachment to the organisation, given that the perceived personal-impersonal involvement in exchanges has an impact on sensitivity to equity (Mowday 1991).

Guest and Conway (1997) highlighted the importance of personal involvement and commitment to the organisation, demonstrating a positive relationship between feelings of organisational commitment and organisational citizenship behaviour. Such behaviour included: making suggestions; helping others; staying late; not wasting time; (and more importantly to the issue of WBL) seeking training to improve performance within the workplace. Indeed, Guest and Conway (1997) found that a majority (76%) of their sample reported seeking training to improve workplace performance, which is a very positive finding for organisations. Furthermore, Guest and Conway...
(1997) reported that the traditional barriers between 'them and us', that is management versus managees, had largely disappeared, key factors in this being a more positive perception of trust and fairness, and increased flexibility and employee involvement. Interestingly, gender also played a part in this break down of barriers, females being less likely to form 'them and us' comparisons. Thus it may be productive to focus on the relative influence of individual versus organisational benefits of WBL on the motivation process.

2.3.5 SUMMARY

This section has highlighted the importance of understanding learning in its social context, emphasising that learning takes place with reference to others (Courtney 1992). Indeed, Meyer and Gellatly (1988) suggest that to be effective goal setting must break through the barrier of what is 'acceptable behaviour' if change is to be achieved. The issue of organisational culture is complex and an in-depth discussion is beyond the scope of this chapter, however, this section has highlighted the need to appreciate the social influences on motivation and behaviour and potentially important issues for WBL, especially values. Management may play an important role in the promotion of training, and training may be an important mechanism for supporting and reinforcing organisational values.

The theories discussed throughout this chapter agree that the culmination of the values process (valence, instrumentality, social norms and expectations) is an energising of the individual, increasing motivation to learn or participate, in other words the readiness and willingness to act (Rubenson 1978, Cross 1981, Darkenwald and Merriam 1982, Lazarus and Folkman 1984, Cookson 1986, Noe 1986, Keller and Kopp 1987, Ajzen 1988, Reid and Barrington 1997). Thus a goal must be perceived as relevant and attainable, and a resource must be seen as valuable to achieve that goal if an individual is to invest energy in pursuing that goal. Indeed, Landy (1989) suggests that, despite the success of goal setting theory at predicting behaviour, it is not a complete theory, in order to understand goal commitment the prerequisites of valency and expectancy must be understood fully (figure 2.9), situational and individual factors are also highlighted (also Campion and Lord 1982, Hollenbeck and Klein 1987, Klein 1989).
Landy (1989) further stresses that Vroom’s (1964) original concept of valency and expectancy were formed as a theory of choice rather than action, hence the importance of these concepts in commitment rather than action. Ajzen (1988) emphasises that the outcome of the values stage is the forming of an ‘intention to act’ – a plan to act in the pursuit of goals. However, he and others (Darkenwald and Merriam 1982, Mitchell 1982) also point out that, whilst people often act according to intentions, the actual attainment of goals is subject to uncertainty and may be influenced by a number of other factors (available information, skills, ability, emotions, opportunities and dependence on others). Indeed, Farr et al (1993) suggest that Kuhl’s (1985) notion of state versus action orientation may be an important mechanism in the link between intention and action. Those who are action-orientated are more likely to focus on the task and actually carry out an action plan. Those who are state-orientated are more likely to focus on what could go wrong and be pre-occupied with present and past failures and thus have difficulty enacting their intentions. Whether an individual is state or action orientated is likely to be based on a number of factors, including unrealistic intentions, fear of failure, loss of control and negative mood (see Farr et al 1993).

Furthermore, in his own review of the literature Landy (1989) emphasised that valency is of utmost importance in understanding goal commitment. Thus it is important that an individual understands the specific relevance or value of the task to themselves before the goal setting and behavioural stages. WBL must therefore be seen as a useful resource to attain salient goals if they are to invest energy in the WBL process. This point is emphasised by Noe (1986) who found that learning effectiveness was influenced by individual ‘motivation to learn’ (measured by subjective appraisal of expectations, instrumentality and valence), which was in turn influenced by the fact...
that training was based on needs identified in the initial skill assessment, and the assessment procedure itself was perceived as credible and relevant to the employee.

Therefore, values theories are a step closer to behaviour offering an explanation as to how individuals with the same need may choose a different course of action to fulfil that need depending on their value system. It is hypothesised that an individual should value WBL as a useful resource addressing both their own and organisational development needs before they will take advantage of opportunities and consequently exploit each opportunity to its fullest extent.

2.4 Goal Setting Theories

Goal setting theories examine specific assigned or self-set targets for addressing needs. Goals are seen as a means of actualising values, they direct the individual towards a specific end-point following progression through the value stage (involving evaluation of self, outcomes and available resources), and are, therefore, placed closest to outcomes in the motivation process (Locke and Henne 1986, Klein 1989, Locke 1991). Goal setting theories are more successful at predicting specific behaviours than both value and needs theories (Landy and Becker 1987, Locke et al 1988) because they are tangible, focusing on specific aims and possible plans of action. Indeed, it has been demonstrated that the major strength of goal setting is that the process triggers an individual’s self-regulatory processes (including self-evaluation and self-monitoring) and prompts ‘on-task processing’ (Kanfer et al 1994). Recent approaches to goal setting have stressed this self-regulatory element, defined as (Farr et al 1993, p.193):

*The cognitive processes related to the allocation of time and effort to the various overt and covert activities directed towards goals or outcome attainment.*

Underlining that goals serve as an important function in regulating resource allocation and the importance of understanding the individual’s perception of the situation and its impact on goal-setting behaviour. Goal-setting theories have been consistently successful at predicting behaviour in a wide variety of contexts, including motivation within an organisational setting (Latham and Locke 1979, Locke and Henne 1986, Arnold et al 1998).

The basic concepts important in the pursuit of goals are portrayed below (figure 2.10). There are a number of well reported findings in relation to goal setting theory, which are in general accepted by
researchers in the area of work motivation, and have been summarised in major reviews such as Locke and Henne (1986), and Landy (1989). The popularity of goal setting research has been driven by its pragmatic application implications for organisations.

As the above diagram suggests goal acceptance/commitment are critical if goal setting is to be successful, for an individual to invest energy in meeting a goal they must accept and be committed to that goal (Locke and Henne 1986, Locke et al 1988, Landy 1989, Locke and Latham 1990, Steers and Porter 1991, Arnold et al 1998). Indeed, this is the link between values and goal setting emphasised at the end of the previous section. However, there is a debate regarding the definition of goal acceptance versus goal commitment and whether they are in fact distinct concepts. Locke and colleagues (Locke et al 1988, Locke and Latham 1990) argue that goal acceptance is a subtype of goal commitment. They define goal commitment as an individual's 'attachment or determination' to achieve a set goal, regardless of whether that goal was self-set or assigned. Goal acceptance is a narrower concept and relates specifically to commitment to an assigned goal.
However, Locke and Latham (1990) do suggest that a distinction may need to be made between commitment relating to enthusiasm to achieve a goal and the mere acceptance that a goal has been set. This agrees with the distinction between acceptance and commitment made by Leifer and McGannon (1986). They define goal acceptance as an attitude reflecting the reasonableness and personal acceptability of a goal, and goal commitment as a determination to achieve a goal and expend energy to attain that goal. The distinction between acceptance and enthusiasm is further supported by their differential relationship to outcomes. Goal commitment is related to performance outcomes, whereas goal acceptance is related to participation rates (Leifer and McGannon 1986). Results from a more recent study further support this distinction, Renn et al (1999) found that goal acceptance was positively related to participation and satisfaction with supervisor, and both goal acceptance and commitment were related to performance. Goal commitment may be an important part of ‘career resilience’ (London 1983) helping individuals overcome setbacks. It is argued that many motivational theories, particularly in relation to adult education, do not explain action only the intention to act (Courtney 1992). However, the strength of that intention is potentially important in distinguishing between participants and non-participants in learning, particularly in overcoming the barriers and limitations to participation (Cross 1981, Courtney 1992).

The effect of individual participation in goal setting on motivation (particularly goal acceptance and commitment) has been hotly debated in the literature. It has been found that whether goals are assigned or self-set they must be relevant and/or justified to the individual concerned if they are to be accepted and pursued (Latham et al 1987). Furthermore, the power of the source assigning goals is also important at this stage (Klein 1989). However, incentives such as monetary rewards have been found to increase goal level and goal commitment (Locke et al 1981), which may be dependent on an individual’s value of money. This has implications for voluntary versus compulsory WBL, where traditionally ‘training’ is often a compulsory part of an individual’s work, focusing attention on ensuring that training/developmental opportunities are ‘sold’ to employees, i.e. justified in their relevance, would be recommended. Furthermore, Baldwin and Magjuka (1991) found that participation in selection of training increased motivation to learn but only when they were provided with the training of their choice. Therefore, when trainees are given the opportunity to select training, provision of non-specified training may have a larger negative
impact on motivation to learn than either not providing training at all or not giving any choice originally. Providing opportunities to participate in selection of training may operate through several mechanisms, for example enhancing feelings of involvement and importance, creation of realistic expectations, enhancing sense of choice and responsibility and alignment of training outcomes and individual goals (O’Reilly 1989, Tannenbaum and Yukl 1992). This last factor may be particularly important given the emphasis on valence in forming intentions to act.

Having acceptable targets that one is committed to provide direction, mobilise effort and increase persistence (Locke and Henne 1996), that is, the ‘force for action’ is initiated as proposed by Rubenson (1978). It is reasonable to assume that the search for appropriate strategies is based on the value placed on resources (discussed previously in section 2.3). Thus positive attitudes towards learning increase the likelihood that this will be considered as an option depending on goals set. Furthermore, the individual must have sufficient ability and knowledge to achieve set goals, which highlights the importance of training in order to ensure success (Latham and Locke 1979).

Furthermore, focused goals motivate the search for appropriate strategies for goal achievement (Locke and Henne 1986). Specific goals have also been found to improve performance as they produce a precise intention to act in a certain way (Arnold et al 1998). From a career motivation perspective, London (1983) suggests that clear goals and pathways are an essential element in successful career development as they help to sustain motivation. The importance of clear goals that relate to individual and organisational goals has been stressed in the training literature (Keller and Kopp 1987, Tannenbaum and Yukl 1992). Vague goals make it difficult for individuals to compare their current state with the desired end state, which results in greater discrepancies in individual behaviour to address goals (Klein et al 1988). However, overly specific goals early in the learning process may be dysfunctional as they allow for very little exploration of the options available (Klein 1989). The optimum level of goal specificity may be difficult to achieve in practice.

Aiming training at the ‘lowest common denominator’ in a group is sub-optimum and can lead to a decrease in training efficacy (Feldman 1989). Indeed, more difficult or challenging goals (that have been accepted) are more likely to lead to improvements in task performance (Locke and
Henne 1986, Landy 1989). Difficult goals are proposed to lead to greater effort in order to reduce the discrepancy between current and desired states (Klein 1989). However, from an organisational perspective, WBL goals should be linked to the organisations own goals, emphasising the importance of aligning organisational and individual goals. In order to promote this, WBL goal setting should be linked to a coherent organisational strategy of employee development (Tannenbaum and Yukl 1992). The relationship between goal difficulty and performance may be moderated by salience of outcomes, self-awareness and task novelty (Klein 1989). Indeed, in goal setting research, Kanfer et al (1994) found that for performance to be enhanced participants had to first become familiar with and understand the relevancy and/or outcomes of a novel task before undertaking the task. They suggest that this phenomenon is due in part to the allocation of attentional resources, thus performance on a novel (or more complex) task could be delayed by the additional processing resources needed to understand task demands before full attention could be given to task completion.

Furthermore, Dweck (1986) suggests that harder ‘learning goals’ (defined as seeking ‘to increase competence, to understand or master something new’ p.1040) are perceived more positively than harder ‘performance goals’ (defined as seeking ‘to gain favorable judgements of their competence or avoid negative judgement of their competence’ p1040). That is, goals that focus on evaluating an individual’s ability rather that the development of a ‘competency’ may be detrimental to an individual’s overall motivation and lead to individuals choosing easier tasks. Learning goals were also found to encourage exploration, persistence in the face of failure and pursuit of different strategies (Dweck 1986). Thus goal difficulty may not be as important an issue as the ‘goal orientation’ of an individual, whether learning or performance orientated (Dweck 1986). In LLL individuals should be focused on learning and developing and not on the successful performance of a task, in WBL there is likely to be a tension between the two. It is further suggested that ‘learning goal orientated’ individuals are more likely to be more confident in their pursuit of goals and attribute lack of success to the choice of a poor strategy and not lack of ability and thus perceive difficult goals as an opportunity to develop rather than a threat to their self-esteem (Farr et al 1993). Encouragement of a learning orientation to goal setting may be one of the key mechanisms for building the ‘learning to learn’ cycle of Reid and Barrington (1997), where it is
suggested that an individual who is learning goal orientated is more likely to be pro-active in terms of their self-development (Farr et al 1993).

Goal pathways should also allow for practice of new skills and application of new knowledge in order to consolidate learning (Feldman 1988), emphasising the need for realistic timescales for learning and acquisition of skills and knowledge. In addition, post-training follow up activities and assessments can aid application of skills and knowledge. For example, Baldwin and Magjuka (1991) found that when organisations provided follow-up activities and assessments to training, trainee intention to apply learning was increased. One possible mechanism for this may be that the organisation are indicating that training is important and that individuals will be held accountable for learning. Developmental pathways should also provide individuals with the skills to cope with high-risk situations in order to prevent relapse into pre-training behaviour (Marx 1982). Practice may be an important element in relapse prevention.

Evaluation that goals have been attained is seen very much a part of outcome criteria, encouraging a constant flow of reappraisal and readjustment within the developmental process. Indeed, the reviewing procedure is highlighted as an essential element in the promotion of organisational learning (Lynn 1997). Feedback or knowledge of results is a necessary and important component of evaluation within goal setting (Keller and Kopp 1987, Landy 1989, Klein 1989). Feedback allows individuals to reappraise their position and development following a WBL opportunity and makes gains explicit (Lazarus and Folkman 1984, Keller and Kopp 1987). Feedback may act through a ‘comparator’ where the perceived outcomes are compared with goal expectations (Klein 1989). Providing information about performance may itself be motivating (Locke et al 1981), and can aid the maintenance of post-WBL behaviours (Klein 1989, Tannenbaum and Yukl 1992) or enable individuals to adjust behaviour if expected outcomes are not achieved (Klein 1989). Feedback, if not appropriately managed, can lead to behavioural or cognitive withdrawal from the task (Klein 1989). Indeed, as outcomes are linked in a hierarchy, sub-goals may also be linked in a series of feedback loops providing a mechanism for the linking of valued outcomes (Klein 1989). However, it is vital that conscious feedback/appraisal is emphasised to increase the effectiveness of feedback, particularly as feedback processing can loop back into the motivation process and affect future motivation in WBL (Klein 1989). The significance of and attendance to feedback is likely to be enhanced when an individual values the
outcomes (Klein 1989). Furthermore, those who are learning-goal orientated are more likely to use feedback as information on how to improve; performance-goal orientated individuals are more likely to use feedback negatively as an evaluation of their current ability (Farr et al 1993).

Through feedback an organisation may be in a position to reward and reinforce the value of behaviour not just financially but more frequently through recognition, approval, sense of belonging and allowing employees to follow interests (O'Reilly 1989). Caplan and Schooler (1990) suggest that feedback is important in helping to form appropriate mental models of learning outcomes, helping participants to understand the material that is presented to them. In organisational learning terms, Argyris (1999) distinguishes between feedback that enhances single-loop learning and feedback that enhances double-loop learning (see figure 2.11).

In single-loop learning, evaluation leading to identification of a mismatch between expected and achieved outcomes leads to a change in action or organisational strategies, such learning may be suitable for routine organisational issues in order to maintain an optimum level of organisational performance (Argyris 1999). However, in double-loop learning when a mismatch is detected the governing variables, defined as 'preferred states that individuals strive to satisfice when they are acting' (Argyris 1999, page 68), are questioned. That is, an individual may question what and why they want to achieve a particular goal. Such a process may lead to individuals questioning underlying values, whether individual group, inter-group or organisational, and may be more
suitable for complex issues within the organisation, leading to a possible restructuring of organisational norms and ‘theories-in-use’ (Shrivastava 1983, Argyris 1999). Thus an employee may start to question why they are actually participating in WBL. This model highlights two important points. Firstly, similar feedback mechanisms as those proposed by Klein (1989) are highlighted as important in the promotion of organisational learning. Secondly, the nature of the feedback and how employees are encouraged to use such feedback may have important implications for the nature of learning, whether single-loop focusing on action or double-loop focusing on goals, values and needs.

2.4.1 ORGANISATIONAL-EMPLOYEE PERCEPTIONS AND INTERACTION

These issues highlight the importance of organisational-employee interaction patterns, and recognition of the importance of environmental influences in individual behaviour. The psychological contract between employer and employee has been identified as an important factor in understanding organisation-employee relationships as it may influence commitment, job satisfaction and feelings of pressure at work (Guest and Conway 1997). Furthermore, perceived violations of the psychological contract have been found to partly predict intentions to remain with the organisation (Robinson and Rousseau 1994). Indeed, it has been suggested that the psychological contract is fundamental to any organisation, literally holding the organisation together as part of its implicit culture (Herriot 1992), and implicitly governing transactions between parties (Hay 1992). The psychological contract also emphasises the issue of reciprocity and may offer a good way of exploring organisational-employee WBL benefits in motivation.

The psychological contract has been defined as:

a form of exchange between employer and employee. The content of the contract and the obligations entailed will vary from person to person and from organisation to organisation, although it is reasonable to assume some common elements. Furthermore, much of the psychological contract ... is implicit.

(Guest et al 1996, p.5)
an individual's belief regarding the terms and conditions of a reciprocal exchange agreement between that focal person and another party ... a belief that some form of promise has been made and that the terms and conditions of the contract have been accepted by both parties.

(Robinson and Rousseau 1994, p.246)

the informal and largely unwritten expectations of employees and employers about their mutual rights and obligations, and about expected inducements and contributions.

(Nicholson 1996, p.177)

The three themes emphasised in these definitions are, firstly, that the terms of the psychological contract rely on organisational/individual perceptions, secondly, the terms are informal, and thirdly, beliefs involved reciprocal or two-way contributions. The organisational perspectives are equally as important as the individual perspectives (Guest and Conway 1997).

Whilst the psychological contract is not explicitly studied in this project, it has some important implications for the study of motivation, particularly its focus on individual beliefs and perceptions and employer-employee interaction. Guest and Conway (1997) stress three key elements that form the single factor of ‘psychological contract’: fairness; trust; delivery of perceived promises (typically career development, job security and workload). These three concepts may be influenced by the ‘involvement climate’ within an organisation, i.e. the extent to which managers engage the individuals’ thoughts and emotions, characterised by open communication and flexibility (Guest and Conway 1997). The strength of the involvement climate has been found to be positively related to strength of the psychological contract and consequently employee satisfaction, commitment and motivation (Guest and Conway 1997).

Thus employer-employee interactions may have a profound influence on employee perceptions of the organisation, which in terms of WBL may relate to whether the organisation can be trusted to deliver learning opportunities that are truly aimed at employee development and promoting availability to all. The concept of a psychological contract is directly applicable to developmental relationships (including learning in the workplace). Indeed, Reid and Barrington (1987) suggest that self-development is seen as an important part of employer-employee contracts, and one of
the key perceived violations of the psychological contract is non-delivery of training and development opportunities (Robinson and Rousseau 1994). Robinson and Rousseau (1994) emphasise that the power of the psychological contract is that it is constructed of perceived promises, broken promises leading to powerful emotions such as betrayal, distrust and anger.

The psychological contract is intangible and open to dissonance between employer and employee expectations, being based on individual and organisational beliefs means a shared understanding cannot be assumed (Robinson and Rousseau 1994). The importance of congruent expectations between all parties is twofold: by helping parties to understand the requirements of the 'contract'; by encouraging participation in development through a sense of understanding (Wollersheim et al 1980). The terms of the psychological contract are fluid, changing in line with organisational and individual experiences (past and vicarious learning) and the environmental climate (Herriot 1992, Robinson and Rousseau 1994), being akin to the appraisal/reappraisal processes suggested by Lazarus and Folkman (1984). In particular, the organisation may influence the state of the psychological contract through the quality of the HRM practices and the involvement climate (involvement, flexibility and communication) - (Guest and Conway 1997). Thus the issue of organisational socialisation, particularly induction where overt promises may be made, is again highlighted as important (Robinson and Rousseau 1994). In addition, the terms of the psychological contract are particularly volatile given the current changes in employment patterns, moving towards transactional (short term) contracts from relational (long-term) contracts (Nicholson 1996).

In terms of organisational learning Hay (1995) suggests that employer-employee interactions can be successfully managed through ‘Developmental Alliances’ (figure 2.12), which are similar in nature to the ‘working alliance’ previously proposed by Egan (1991) in relation to helping relationships. A balance exists within the contracts between the interested parties, where the organisation may invest funds in the individual and expect a reasonable return but recognises that employees develop and may finally need more than the organisation can offer (Hay 1995).
Figure 2.12 demonstrates the different approaches to employee development and the dimensions upon which they differ (person-led versus organisation-led, long-term versus short-term). This serves as a useful way to organise and understand the stance upon which organisations approach development, and highlights important organisational values. The characteristics of a developmental alliance are, therefore, person-led with a long-term focus, which are analogous with the philosophy of lifelong learning and WBL. The developmental alliance may be particularly important in the current employment climate, recognising that long-term employment may not be a reality and that the freedom to develop transferable skills must be given to employees. Hay (1995) stresses the need to focus on the ‘transformational’ elements of an organisation, a recognition of the inevitable changes that will occur and subsequent demands on employees. More recently, Alimo-Metcalfe (1999) also recognises that in the current dynamic organisational climate it is of utmost importance for leaders to be aware of and enhance their ‘transformational’ management skills, in addition to ‘transactional’ skills.

These proposals are further supported by other approaches to the helping relationship. Egan (1991) proposes five key values that are essential for a successful outcome: pragmatism; competence; respect; genuineness; individual self-responsibility. The helping relationship should
be useful, focused on real life, be flexible, encourage action and avoid resistance from the person being helped. The helper should be competent and promote real outcomes. Respect for one another should be communicated in the way that individuals interact, and should be constructive rather than destructive, they should know their own strengths and weaknesses. The individual should take responsibility for their own development, fostering self-respect and subsequently satisfaction (Murray 1988). This combination of relationship values provides the helper with a power-base from which to aid the individual, thus in the learning relationship a 'tutor' who adopts this approach should facilitate the motivation process by encouraging the individual's own energy and autonomy, fostering LLL.

However, in the organisational learning relationship it should be recognised that a tension may exist between the goal of individual autonomy versus the attainment of organisational goals (which may dictate the learning opportunities made available within the organisation). Indeed, Argyris (1999) has highlighted the complications in organisational learning that arise due to power relations within an organisation. Essentially, this is a two-way relationship with two sets of needs (organisational versus individual), which may be complementary or dissonant. A collaborative relationship is needed, which is democratic and empowers the employee but also focuses on the needs of the organisation.

This section has highlighted goal attributes and goal setting procedures that could have an important impact on learning behaviour. The interaction between employer and employee was also discussed and highlighted that in terms of the learning contract, all parties need to 'own' the development process, and share a basic understanding of the major goals and the procedures involved in attaining these goals for successful outcomes (Egan 1991). Guest and Conway (1997) stress that fairness, involvement and flexibility stand out as key issues in organisation-employee relationships.

2.5 Outcomes

A number of authors (Paxton 1976, Noe and Schmitt 1986, Howard 1989, Tannenbaum et al 1991) have proposed three important outcomes of developmental events: behavioural change possibly leading to increased productivity and innovation; learning; satisfaction and confidence. Warr et al (1999) present a useful framework of outcomes, based on Kirkpatrick (1987), where four clear
outcomes result from 'training': trainee reactions; amount of learning; job performance; impact on organisation. The last category emphasising that learning within an organisation will impact on the organisational as a whole, a point clearly emphasised by those advocating the learning organisation approach (Pedler et al 1997). Similarly, Locke (1991) suggests that the motivation sequence should result in performance of behaviour, rewards for level of performance and subsequent satisfaction that a goal has been achieved. Thus in terms of the WBL-motivation framework, goal setting should result in participation in a developmental opportunity, which may or may not result in a valued outcome, such as mastery of a skill. Following performance the resulting evaluation of the success or otherwise of the behaviour, (i.e. 'has the valued outcome been achieved?') will be experienced in terms of emotion, satisfied that we have achieved our goal or dissatisfied that we have not.

One of the most prevalent debates in this area regards the nature of the relationship between emotions (principally satisfaction) and performance and productivity. Locke and Latham (1990) suggest that this debate is actually focusing on two different relationships. Firstly, that success in performance will lead to more positive emotion (satisfaction), and failure will lead to dissatisfaction. Secondly, that satisfaction will influence future performance, linking past experiences to future events.

The first relationship between level of performance (success or failure) and satisfaction is intuitive and has strong support in the literature. For example, typical correlations between successful performance and satisfaction are about 0.51 (Locke and Latham 1990). There is also strong theoretical support for such a relationship. For example, Keller and Kopp (1987) focus on the emotion of satisfaction with learning as the ultimate outcome of developmental opportunities in their ARCS model. Indeed, the performance-satisfaction relationship is reminiscent of Maslow's (1987) original concept of need-satisfaction, which Locke (1991) highlights as an important element in completing the motivation cycle, this cycle is not perceived as complete until an individual is 'satisfied' that the expected valued outcome has been achieved. However, Latham and Locke (1990) highlight that the relationship between successful performance and ultimate satisfaction is dynamic; the degree of satisfaction being affected by numerous factors including, implications of success, timing of success, significance of outcomes, degree of success and causal attributes. The relationship between success and satisfaction may be indirect, where
success is likely to be linked to satisfaction through cognitive-appraisal of the acquired rewards (Locke and Latham 1990, Locke 1991). The outcomes of performance being evaluated against the individuals value set; where goals are perceived as being achieved and the resultant outcomes are important to the individual then satisfaction will ensue; where goals are perceived as not being achieved and the expected outcomes were important to the individual then dissatisfaction will ensue.

The second relationship between satisfaction and future performance is more hotly contested. Indeed, typically weak relationships ($r=0.146$) have been found between satisfaction and future performance (or productivity) - (laffaldano and Muchinsky 1985, Staw 1986). However, Locke and Latham (1990) suggest that it is vital to explore this relationship if we are to fully understand motivation and behaviour. Locke (1991) suggests that satisfaction is likely to indirectly influence future performance through its effects on expectations. In practice, Tannenbaum et al (1991) found that satisfaction with training was positively related to increased expectancy that training will be useful in the future and commitment to the organisation, similar to outcomes of IIP participation (CREATE 1996). Indeed, it has also been suggested that dissatisfaction leads to reduced expectations (Howard 1989). Mathieu et al (1992) found support for the role of ‘satisfaction with learning’ as a moderator of the relationship between motivation and learning. Indeed, based on their findings, Mathieu et al (1992) stressed the importance of including satisfaction in future research trying to understand the link between motivation and learning outcomes.

Additionally, Handy (1993) concludes that there is good evidence to show that satisfaction is linked to lower absenteeism and turn over amongst staff and improved employee mental health. Organ (1988) suggests that there is much evidence to show that satisfaction is related to prosocial behaviours and interaction patterns, for example, employees increasingly putting forward suggestions for improvements, helping others, taking on extra responsibility and participating in WBL. Latham and Locke (1990), through a meta-analysis of studies, concluded that satisfaction was related to organisational commitment (where mean correlations between satisfaction and commitment were around 0.64), which in turn led to acceptance of future goals and ultimately improved performance. Furthermore, Handy (1993) suggests that a lack of satisfaction will lead to ‘satisfying’ (a concept dating back to Simon 1960 in relation to decision making strategy) becoming the norm. That is, individuals will invest just enough effort in strategies to address work
tasks rather than investing maximum effort for maximum gain, an approach that will ultimately impact on growth. Thus while satisfaction may not be directly linked to future performance it is nevertheless an essential underpinning factor in the motivation process (Locke and Henne 1986). However, a new body of evidence is emerging that links satisfaction with performance in a non-linear relationship; it was suggested that a strong relationship between satisfaction and performance is present in conditions where satisfaction is high and role conflict is low, thus the relationship between the two is bounded (Somers 2001). From this perspective, employees:

Must not only be satisfied with their job, but must also have a clear conception of their job responsibilities before job satisfaction translates into job performance.

(Somers 2001, p.59)

However, performance outcomes may be influenced by many other factors such as available resources and ability (Lawler and Suttle 1973, Tannenbaum and Yukl 1992). Indeed, Ajzen and Fishbein (1980) stress that behaviour and performance are two distinct outcomes, behaviour does not always lead to a 'successful' performance outcome. Interestingly, Naylor et al (1980) suggested that employee behaviour in organisations primarily involves decisions about the distribution of time and effort to tasks, as these are the only real commodities that individuals have to offer the organisation. Indeed, in motivation research, effort is often more successfully predicted than performance level because of the many conditions that might affect performance outside of the individual's control, alongside the individual's ability (Tannenbaum and Yukl 1992).

Beyond the debate regarding the satisfaction-performance relationship, emotions are seen as an essential part of any complete theory of motivation (Buck 1985, Weiner 1986). Emotional arousal is proposed as important throughout the motivation process as we need to be aroused emotionally if we are to act (Locke and Henne 1986, Locke and Latham 1990). Buck (1985) suggests that emotion and motivation are two sides of the same process, motivation represents the 'potential for behaviour', emotion involves 'the means by which that potential is realised' (p.396). However, Buck (1985) emphasises that emotion is ever-present not merely 'switched on' when we are dissatisfied and 'switched off' when we are satisfied. When satisfied individuals may be content to behave in the same way, but here emotion is aiding behaviour maintenance, just as when we are dissatisfied behaviour may change. Indeed, Klein (1989) suggests that the affective element of
motivation is based on the perceived discrepancies between desired and current states. Behaviour is thus initiated by the desire to resolve resultant discrepancies and reduce dissatisfaction; the intensity of the emotional reaction may be moderated by the valence of the goal (Klein 1989, Locke and Latham 1990). Weiner (1986) suggests a similar mechanism where behavioural outcomes are assessed along three dimensions (locus of causality, stability of outcomes and perceived controllability) resulting in an emotional reaction (positive or negative) that will subsequently affect future motivation and behaviour (indicative of an important feedback loop in the framework). For example, the perception that a perceived negative outcome (for example failure of an exam) is unusual or unstable and unlikely to reoccur may result in hopefulness for the future and increased effort (for example increased revision). Thus, it is proposed that the evaluation of the current situation (i.e. whether or not goals have been achieved) will impact on future behaviour through its influence on emotion (Weiner 1986, Klein 1989, Locke and Latham 1990, Locke 1991).

Warr et al (1999) suggest that the cognitive element of trainee reactions is often neglected in evaluation studies, that is, trainees are often asked how much they enjoyed a training experience rather than how useful they felt it was for them. Indeed, Lazarus and Folkman (1984, p. 285) stress that cognition and emotion are intrinsically linked:

_Cognitive activity is an essential part of an emotional response; it provides the evaluation of meaning on which emotion depends._

More specifically, Locke (1976, p. 1300) defined satisfaction as:

_a pleasurable or positive emotional state (affect) resulting from the appraisal (cognition) of one's job or job experiences._

Thus Locke and Latham (1990) suggest that emotions are outcomes of the cognitive-appraisal process, based on an evaluation by the individual of whether a situation will positively or negatively impact on value fulfilment; the more important the value the stronger the emotional reaction. Thus emotion is the way in which we experience appraisals of value fulfilment (Buck 1985, Locke and Henne 1986, Locke and Latham 1990, Locke 1991). Appraisals of work-related experiences are likely to be influenced by perceptions of organisational-individual interactions.
such as fairness in treatment and provision of appropriate resources, as proposed by researchers of the psychological contract discussed earlier (Organ 1988, Locke 1991, Guest and Conway 1997). Buck (1985) also emphasises the subjective nature of the cognitive interpretation of emotions. In addition, Organ (1988) highlights that job satisfaction measures often measure satisfaction as a dual concept, assessing both cognitive and affective elements of satisfaction.

Thus the cognitive and emotional outcomes of development are as important as the learning and behavioural outcomes, despite a tendency for organisations to evaluate development from purely learning and behavioural aspects. A cyclical process is indicated where satisfaction with development may have an important impact on the future motivation-WBL process (Tannenbaum et al 1991). Many studies have persisted in attempting to relate satisfaction with performance or attempt to study ‘training and development’ effectiveness in terms of behavioural indicators (and associated productivity), rather than focusing on how emotion and cognition may underpin the whole motivation process (Staw 1986). This discussion has highlighted the obvious emphasis laid on emotion and cognition throughout the motivation process, particularly the importance of reactions to training and development (satisfaction and dissatisfaction), thus this project will ensure that emotional and cognition (subjective appraisals) outcomes are not neglected in favour of learning or behavioural outcomes.

2.6 A FRAMEWORK FOR FURTHER INVESTIGATION

This research identified the need for a holistic model describing the WBL-motivation process and this chapter represents the first step towards development of such a model. As described within this chapter, the initial development of this model was based on an original framework developed by Locke and Henne (1986) and later Locke (1991), which highlights the major factors to be explored and defines motivation as a process composed of several stages (needs, values, goals and outcomes) that work together to account for individual variances in behaviour, each stage amplifying the differences among individuals (Locke and Henne 1986, Aamodt 1991, Locke 1991).

This chapter has explored each stage of the Locke and Henne (1986) framework (figure 2.1, page 21) in depth, highlighting issues pertinent to WBL at each stage. Figure 2.13 represents the first step towards development of a WBL-specific motivation framework based on the discussion in this
Chapter 2 - Building a Motivation Framework

The model aims to illustrate the main concepts highlighted as important for further exploration in the WBL-motivation process in subsequent stages of the research.

This discussion has highlighted that the Locke and Henne (1986) model is highly relevant to the WBL-motivation process, hence the main structure of the framework in figure 2.13 is similar to that proposed by Locke and Henne (1986). This organisation of the motivational process highlights the multi-factorial nature of motivation, indicating that to understand the role of motivation in work-based learning we have to examine a number of elements from both an organisational and employee view. The discussion within this chapter has highlighted the potential nature of these elements. These elements are: the ‘developmental needs-valued outcomes chain’ (the purpose served by WBL); the value placed on both formal and informal WBL (how instrumental it is perceived to be in achieving desired outcomes), the confidence to achieve desired outcomes (expectancy); the specific learning goals set; the behavioural, performance/learning outcomes and satisfaction. In addition, demographics such as age, gender and socio-economic group are
included as many adult education studies have found these to be important factors in motivation in adult education (Ruiz-Quintanilla and Wilpert 1990).

The feedback loops emphasise the important role played by evaluation in influencing future perspectives of WBL. It is also important to understand the interaction between the organisation and the individual at each stage. For example, there is a need to establish if the organisation and employees alike share valued outcomes and whether an organisation's approach to WBL will impact on an employee's views on WBL. Furthermore, the diversity of WBL will be emphasised, incorporating both formally-delivered courses including in-house training and the informal learning opportunities in the workplace (mentoring, work-shadowing, job swaps and departmental exchange). It is thus also necessary to explore individual and organisational definitions of WBL, departing from studies that focus on formal education/training sessions.

2.7 SUMMARY

The importance of WBL to organisations and individuals alike is emphasised by the continual social and technological changes facing organisations today, where all forms of training play a key role in ensuring the future stability and success of organisations (Department of Employment 1992, Arnold et al 1991). It can be argued that the key to the success of WBL will not only be promoted through industry-educational partnerships and appropriate funding but also relies heavily on individual employees. Their motivational perspectives may heavily influence both individual and organisational participation in, and learning from, WBL opportunities. Thus exploration of employer-employee motivational perspectives may enhance understanding of the design and progression through WBL.

Currently, there is no holistic model of the WBL motivation process, despite the large amount of motivation research focusing on more traditional educational settings and the training environment. The need for a metatheory linking the main motivational concepts together has been proposed by a number of authors (e.g. Locke and Henne 1986, Klein 1989). The demand for such a framework has been driven by the need to more clearly define motivation, a complex task given the abundance of motivational theories that exist, enabling inter-study comparison. This chapter developed a framework (figure 2.13) for exploring motivation generated from an

The specific elements within the framework have not as yet been extensively studied in the work-based learning literature, however main research findings from ‘work motivation’, ‘adult education’, ‘career development’, ‘training’ and ‘stress and coping’ were congruent with the stages within the framework (needs, values, goals and outcomes) - (e.g. Darkenwald and Merriam 1982, Cookson 1986, Noe 1986, Tannenbaum et al 1991, Courtney 1992). It seems reasonable that these findings will extend to the WBL situation, particularly given that proposals for best practice in the promotion of organisational and employee development, such as IIP (IIP UK 1997) and Learning Companies (Pedler et al 1997), emphasise these elements. The importance of exploring individual perceptions of WBL at all four stages has been highlighted throughout this chapter. Exploration of theoretical models and research findings has highlighted the need to be aware of the importance of how individuals perceive their own development, including what opportunities they perceive are available to them, their perceptions potentially differing from the actual situational circumstances. The motivation process described is based to a large extent on individual interpretations and evaluations.

Furthermore, the importance of exploring environmental conditions in both facilitating and hindering participation in WBL schemes has been emphasised, including: financial issues; geographical constraints; peer group and family influences; awareness of environmental opportunities; learning climate. As the organisation within which an individual works creates the WBL environment there may be important organisational influences on the motivational process that may arise from the complex social relations between employees and the employer (Coates 1993, Ruiz-Quintanilla and Wilpert 1990, Steers and Porter 1991). These issues may include the creation of WBL opportunities, facilitation of participation and removal of barriers to learning and organisational commitment to encouraging participation (Argyle 1989). If WBL is to be exploited as a useful resource to individuals and industry alike it is vital to explore the dynamics of the learning setting, not least the impact that the organisation itself has on the individual. Employer-employee and inter-employee interactions may promote co-operative or conflictual situations affecting the adoption of WBL. If the environment within which individuals operate is not or at least is perceived not to be supportive for learning then the adoption of WBL may be inhibited.
While interactions between the groups can encourage growth and self-development and be mutually beneficial to the groups concerned the environment can also provide an atmosphere of instability and lack of commitment which can seriously hinder the onset and progression of WBL. Thus using the proposed framework as the basis for exploration, there is a need to define each of these stages as they relate to WBL from both an organisational and an individual perspective, particularly as organisations and individuals expect to gain from WBL.

It is clear that the current state of research means that there is a lack of a coherent theory underpinning our understanding of the role motivation plays in WBL. However, findings from diverse fields discussed in this chapter may have important implications for the implementation of WBL schemes indicating the need to identify both the individual and environmental motivational factors and the potentially complex interaction between these factors. However, care must be taken to recognise the informal aspects of WBL as well as the formal, as it is hypothesised that there may be important differences in individual recognition and perceptions of WBL. This view is supported by the adult education researchers, where it has been argued that an individual must also be aware of the educational resources available to them if they are to take advantage of these (Cookson 1986), this may certainly be the case in WBL where they may be a number of implicit, unstructured learning opportunities.
CHAPTER 3

METHODOLOGY
Methodology

The previous chapter discussed research pertinent to motivation in WBL and the development of a framework that will be used as a foundation for modelling the motivation-WBL process. This chapter discusses the methodology used in construction of a WBL-motivation model, describing the three major research stages that reflect the process of model development, as follows:

**Stage 1** Use of focus groups and interviews with employees and employers to establish their motivational perspectives in WBL and to develop an initial model (section 3.2).

**Stage 2** Further exploration of the definition and nature of factors underpinning employee motivational perspectives in WBL and amendment of the model accordingly. A project-specific questionnaire is also developed at this stage (section 3.3).

**Stage 3** Testing the amended model of motivational perspectives in WBL, particularly the overall model fit of the data, identification of significant factors and the relationships between factors (section 3.4).

Each section provides details regarding the rationale, development and usage of methods adopted in this project. Firstly, the next section will discuss some of the main issues relating to epistemology and methodology and will also locate the approach adopted by this project within an epistemological paradigm.

### 3.1 Epistemology and Methodology

An ongoing qualitative-quantitative debate exists focusing on the validity of both 'qualitative' and 'quantitative' epistemological concerns and associated 'qualitative' and 'quantitative' methods. This is a key issue in modern psychological literature, where it has been hotly contested whether
these two 'quantitative' and 'qualitative' approaches are distinct competing paradigms or complementary strategies (Cassell and Symon 1994, Hammersley 1996, Richardson 1996). Indeed, this issue is a particular concern for organisational psychology, where it has been recognised that a methodological bias can limit theory development and thus there is a need to reduce reliance on quantitative procedures and move towards an increasing use of qualitative procedures (Sparrow 1999), challenging and reflecting on our own epistemological assumptions that underlie our usage of such methods (Johnson and Cassell 2001).

Many authors (Bryman 1988, Silverman 1993, Hammersley 1996, Symon and Cassell 1998, Trochim 2001a) agree that a quantitative-qualitative debate can be unproductive and does not recognise the great diversity and contentions within both approaches. Further, it has been emphasised that linking particular methods with particular epistemological positions is little more than unhelpful convention; specifically Bryman (1988, p. 125) states that:

*methods are probably much more autonomous than many commentators ... acknowledge ... they can be used in a variety of contexts and with an assortment of purposes in mind.*

Thus epistemological concerns should not overshadow methodological considerations. Rather, it is suggested, one should represent research in terms of cycles of exploration and testing where the goals of research are dynamic and evolutionary (Hammersley 1996). Accordingly, so-called 'quantitative' and 'qualitative' resources may be used for both exploring data and testing hypotheses and the full range of method options should, therefore, be explored regardless of epistemological biases (Bryman 1988, Hartley 1994, Hammersley 1996, Trochim 2001a). Further, there is a recognition that methodological plurism can help overcome the problem associated with fallibility of measurement techniques (Johnson and Cassell 2001, Trochim 2001b). Both practical and epistemological concerns should be considered in the context of research goals and the topic under study, not addressed in isolation from the research context (Hammersley 1996, Symon and Cassell 1998).
Bryman (1988) suggests that researchers base decision-making along two dimensions (technological and epistemological), enabling research projects to be placed within a matrix according to their relative positions on the two continua (figure 3.1).

![Figure 3.1: The quality-quantity debate (after Henwood 1996)](image)

Bryman (1988) explains that the technical (numerical or non-numerical) decisions are based on pragmatic considerations (e.g. measurable variables, resources and sampling considerations), whereas the epistemological debate centres on the researcher's view of what constitutes legitimate inquiry (realist or idealist). Thus separating the type of data collection methods used from the epistemological bias of the researcher. Indeed, Hartley (1994) argues that various data collection methods should not be classified as qualitative or quantitative, rather their position within the matrix (figure 3.1) should be defined by how they are applied and interpreted by the researcher. Furthermore, this matrix allows for a softening of the boundaries between the different schools of thought, and a project's positioning can be assessed along the two continua rather than at one extreme of the other. Indeed, producing a definitive list of characteristics representing 'qualitative' versus 'quantitative' epistemological approaches has proved difficult, primarily as individual researchers may not subscribe to all of the underlying principles associated with each approach (Bryman 1988). Hammersley (1996) also acknowledges the great diversity not only between but also within the two so-called 'quantitative' and 'qualitative' camps, hence researchers are more
likely to lie somewhere along an 'epistemological continuum' (rather than at one extreme or the other) reflecting the great variety in approaches to research.

Epistemology serves as a 'vantage point', a step back from actual practice, from which we are able to reflect on our approach, bringing underlying assumptions to the forefront that are hence subject to scrutiny (Johnson and Cassell 2001). In terms of the epistemological continuum, the extreme realist perspective is defined as:

\[ \text{the task of research is to document features of objects that exist independently of the researcher's interpretation of them... 'lifting the veil' that covers reality and 'unearthing' what is going on} \]

(Hammersley 1996, p.165)

based on the assumption that:

\[ \text{the physical world has a reality separate from perception and mind} \]

(Reber 1985, p.616)

In contrast, the extreme idealist perspective is defined as:

\[ \text{reject(ing) any possibility of representing reality: it recognizes that there may be as many realities as there are persons} \]

(Hammersley 1996, p.164)

based on the assumption that:

\[ \text{ultimate reality is mental and that this mental representation forms the basis of all experience and knowledge. From this point of view it is meaningless to speak of the existence of things independent of their perception and experiencing by a conscious observer} \]

(Reber 1985, p.340)

Thus, the realist seeks to establish underlying patterns that exist in individuals' actions and to discover the structural determinants of these patterns (Henwood 1996). Thus, this project can be placed towards the realist pole of the epistemological continuum as it seeks to develop a model of
the motivation-WBL process that underpins individual WBL. Indeed, it has been suggested that model development implies a belief in a concrete social reality consistent with the realist perspective (Gill and Johnson 1991). However, the search for an underlying 'reality' does not preclude the importance of understanding individual perspectives of this 'reality'. Indeed, such subjectivity is viewed by the realist as integral to the 'construction' of factors/concepts within a model (Gill and Johnson 1991). This thesis seeks from the outset to understand individual perspectives of WBL and motivation.

With regard to the technical continuum, in accordance with Bryman (1988), Hammersley (1996), Silverman (1993), Johnson and Cassell (2001) and Trochim (2001a), rather than distinguishing 'numerical' as superior to 'non-numerical' methods or vice versa, the methods chosen within this study were based on an assessment of how well they could address the research goals of exploration and testing of the model, as well as the inevitable pragmatic considerations (not least the issue of access). A well-established combination of 'qualitative' model development techniques and 'quantitative' development/testing methods was utilised (Hammersley 1996). The first stage of the thesis was concerned with understanding and exploring the model framework from an employer-employee perspective. Thus focus groups and semi-structured interviews were used to capture individual perceptions of motivation in WBL, utilising the strengths of these methods to capture participants' own way of understanding their situation (Silverman 1993). Furthermore, using this approach enabled the assessment of congruence and dissonance between employer and employee perspectives and an appreciation of the influence of organisational context on motivation in WBL and employer-employee interactions. A package of measures was then used in stages two and three to further develop the emerging theories from the perspective of a wider audience and modify the model accordingly.

### 3.2 Stage One: Initial Development of a WBL-Motivation Model

As an initial step towards developing a WBL-motivation model, the first stage of this project aimed to explore employee-employer perspectives of the WBL-motivation process in order to more specifically define the motivational framework, proposed in chapter two, within the WBL context. Thus the first stage of the project aimed to fulfil project objectives one, two, three and four; to
establish employer-employee understanding of WBL and gain an insight into the scope of WBL activities recognised; to explore the nature of and interaction between motivational factors in the WBL process from both an employee and employer perspective; to examine areas of congruence and dissonance between employer and employee motivational perspectives in the WBL process and the potential impact on WBL; to develop a model that aids understanding of motivation in the WBL process.

Chapters one and two established that little research has been conducted examining the motivational perspectives of employers and employees towards WBL within a holistic framework, hence an exploratory research approach was deemed appropriate. Exploratory research is recommended when little is known about an area, enabling the researcher to further their understanding of the topic under study both through identification and prioritisation of salient issues within an area resulting from data collection and through clarification of various important concepts identified pre-data collection (Oppenheim 1992, Churchill 1995).

Stage one methodology was conducted in two parts:

**Part 1:** Focus groups with employees to identify their motivational perspectives in work-based learning (WBL);

**Part 2:** Individual semi-structured interviews with senior training managers to identify the organisational motivational perspectives in WBL.

### 3.2.1 PARTICIPANTS

Participant selection involved three levels of selection, initial sampling of organisations, contacting relevant training managers, and employee selection.

### Organisation Sample

This stage of the project focuses specifically on the financial sector, which plays an important role in sustaining the UK industrial and financial position within Europe (Pike and Neale 1993). A role
that places constant demands on this sector to remain at the forefront of new developments if it is to remain productive and competitive at an international level.

The financial sector in Cardiff was targeted for a number of reasons:

- The financial sector is a rapidly growing sector in Cardiff, with the establishment of several large companies in Cardiff Bay, a large re-development area;

- This sector offered a certain degree of homogeneity across different companies with respect to employee entry level requirements (academic qualifications) and continual demands to attain further qualifications and skills, such as membership of professional bodies (e.g. Chartered Institute of Bankers) or following an NVQ course, especially for those employees interested in career development;

- The steady stream of new developments in relation to both operational and technological issues within this area highlights the importance of an efficient training structure that ensures that both employees and the resources provided for them are continually being updated. The promotion of formal and informal WBL opportunities may be of vital importance to such companies, offering organisationally relevant training and efficient use of everyday experiences to enhance, extend and contextualise learning.

It is recognised that development needs of different sectors, for example retail, finance and engineering, may be diverse. The relevance of findings to other sectors was assessed through the inclusion of various sectors in later stages of the thesis.

The UK Standard Industrial Classification (UKSIC) system (1992) was consulted to provide an overview of the financial organisations operating in Cardiff. UKSIC(92) identifies 12 categories into which organisations within the financial sector can be placed, of these, 6 are represented in the Cardiff and Vale of Glamorgan areas:

- Banks and Building Societies (SIC 65.12, n=14);

- Credit Granting (SIC 65.22, n=19);
• Investment (SIC 65.23, n=2);
• Non-Life Insurance (SIC 66.03, n=4);
• Activities Auxiliary to Financial Intermediation (SIC 67.13, n=35);
• Activities Auxiliary to Insurance and Pension Funding (SIC 67.2, n=70).

It should be noted that organisations within the Cardiff and Vale of Glamorgan area have been classified according to their primary role and may offer a range of additional financial services albeit in a secondary capacity. The financial sector is characterised by a wide range of organisation types ranging from large enterprises (defined as over 500 employees, Hendry et al 1995) through to independent and self-employed individuals. The latter two categories from the list above are particularly composed of micro enterprises (defined as less than 10 employees, Hendry et al 1995).

Three organisations in total were used in this stage of the research. While sample size is a major issue for ‘quantitative’ approaches, the rationale behind ‘qualitative’ sampling are quite different, that is, it is not focused on generalisability but on discovery (Silverman 1993, Kelle and Laurie 1995, Hammersley 1996); where generalisability is assessed through constructing a holistic picture over repeated studies (Knodel 1993, Kelle and Laurie 1995), and a system of purposive sampling is usually employed (Oppenheim 1992). Indeed, in this case two issues were considered particularly important when assessing WBL and differences between organisations, that is, resourcing issues and Investors in People (iIP) status. It was decided to focus initially on large enterprises as differences in resources (financial and personnel) available for employee development could be assumed to be minimal and resourcing allocation was likely to be primarily policy driven, aiding comparison between organisations. This is a particularly important consideration given that small and medium size enterprises (SMEs, defined as less than 250 employees, Hendry et al 1995) may face considerable resource challenges for developing employees (Joyce et al 1995). In addition, it was important to gain access to both iIP and non-iIP organisations as this may have an important impact on development policy and be a good indicator of an organisation’s stance on development.
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Large companies were identified from a directory of financial enterprises and a list of potential participant organisations constructed. A telephone survey was conducted to invite organisations to participate in the project, protocols (appendix 5) were sent to interested parties and eventually three organisations agreed to participate. The three organisations consisted of:

- Organisation A - a major industrial insurance company (not a member of IIIP);
- Organisation B - a major high street building society (in the process of gaining IIIP status);
- Organisation C - a major high street bank (member of IIIP).

**Employer Sample**

The senior training managers from each organisation were invited to participate in a semi-structured interview. The sample (n=3) consisted of:

- Training manager A - female, aged 40 years, length of time in post 6 years;
- Training manager B - male, aged 43 years, length of time in post 8 years;
- Training manager C - female, aged 37 years, length of time in post 5 years.

The senior training managers were selected as representatives of the organisational WBL perspective, primarily because they would possess the relevant knowledge of the organisational employee development policy, in addition to having input into the development and implementation of this policy. This purposive sampling approach is advocated for use with semi-structured interviews (Oppenheim 1992).

**Employee Sample**

Participants were sampled from the three different financial organisations based in Cardiff. A representative of each organisation selected candidates according to set criteria. The composition of participants within a focus group was carefully considered as this can greatly affect the outcomes, particularly when individuals in a group conflict within one another over issues that are not directly relevant to the topic under study (Churchill 1995). Homogeneity within focus groups
has been advocated to reduce any variance among individuals that will hinder with data collection (Churchill 1995, Krueger 1994), although the actual characteristics of the groups that will define homogeneity are dictated by the particular aims of the study and how different characteristics will affect group interaction (Krueger 1994). Furthermore, precautions needed to be taken to prevent domination of discussion groups by individuals or sub-groups (Churchill 1995).

The following criteria were set:

**Inclusion Criteria:**

- **Candidates for each group must be of similar hierarchical levels within the organisation.**

Homogeneity of the focus groups was defined by the candidate's hierarchical position within the organisation. In situations where individuals work together, as in this study, it is important for groups to be composed of individuals at similar hierarchical levels within the company (Churchill 1995, Krueger 1994). Groups that are composed of supervisors and their subordinates are particularly discouraged as differing status according to level of income or occupational level will discourage disclosure within that group. Indeed, Albrecht et al (1993) highlight the potential threat to the validity of data when individuals are not of equal status through its impact on group dynamics and communication.

- **Each group should contain a mix of males and females within the limitations of the available workforce.**

- **Each group should contain a mixture of age groups reflective of the composition workforce within the limitations of those employees available.**

It was desirable for groups to be composed of a mixture of males and females within different age groups as it was vital to explore the potential differences between these groups in relation to WBL. As participants within each focus group would be of equal status within the organisation it was not anticipated that mixing candidates in this way would adversely affect group interaction. Indeed, this approach would ensure that the focus groups could actively encourage debate, being diverse enough to encompass contrasting opinions, as recommended

Exclusion Criteria:

- **Candidates who hold senior level management positions within the organisation.**

At this stage of the study it was desirable to exclude senior level management within the organisations as they were likely to have input into the implementation of WBL policy. The views of those who implement WBL policy within the organisation were to be captured through interviews with the respective senior training managers and compared and contrasted to employee views identified here.

- **Candidates who are relatives or known to be close friends (as recommended by Churchill 1995, Krueger 1994).**

Candidates who were close friends or relatives may either be intimidated by the members of the group that they are friends/relatives of, or may form subgroups within the focus group and dominate discussion and group interaction. While it was desirable to avoid close friends being included in the focus groups, it was acknowledged that in an organisational setting this might be difficult to avoid (as would antagonistic relationships). Indeed, Morgan and Krueger (1993) recognise the difficulty of avoiding acquaintances in organisations and stress that in order to combat associated problems the moderator should be particularly vigilant in such situations.

- **Candidates who have had extensive prior experience of participating in focus groups (as recommended by Churchill 1995).**

Candidates who have prior experience of focus groups may present themselves as experts to the rest of the group and discourage the exploration of ideas through group domination.

The resultant participant group was composed of 34 employees (divided into 6 focus groups); the following table details the resultant demographics for each organisation and in total (table 3.1):
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<table>
<thead>
<tr>
<th>Factor</th>
<th>Organisation A (n=12)</th>
<th>Organisation B (n=12)</th>
<th>Organisation C (n=10)</th>
<th>Total (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (m:f % ratio)</td>
<td>66:34</td>
<td>17:83</td>
<td>60:40</td>
<td>47:53</td>
</tr>
<tr>
<td>Age (median, IQR)</td>
<td>25-34 (1)</td>
<td>18-24 (1.25)</td>
<td>25-34 (1.25)</td>
<td>25-34 (1)</td>
</tr>
<tr>
<td>Marital status (single:married % ratio)</td>
<td>25:75</td>
<td>83:17</td>
<td>60:40</td>
<td>56:44</td>
</tr>
<tr>
<td>Income (median, IQR)</td>
<td>15,001 - 20,000 (1)</td>
<td>10,001 - 15,000 (1)</td>
<td>15,001 - 20,000 (2)</td>
<td>15,001 - 20,000 (1.5)</td>
</tr>
<tr>
<td>Length of service (mean, std dev)</td>
<td>12.71 (5.41)</td>
<td>6.92 (10.20)</td>
<td>9.94 (7.25)</td>
<td>11.32 (7.07)</td>
</tr>
<tr>
<td>Age left formal education (mean, std dev)</td>
<td>18.21 (1.78)</td>
<td>17.67 (1.37)</td>
<td>18.41 (1.87)</td>
<td>18.08 (1.68)</td>
</tr>
<tr>
<td>Academic qualifications (median, IQR)</td>
<td>'A' level or</td>
<td>'A' level or</td>
<td>'A' level or</td>
<td>'A' level or</td>
</tr>
<tr>
<td></td>
<td>equivalent (1.5)</td>
<td>equivalent (1)</td>
<td>equivalent (2)</td>
<td>equivalent (1.25)</td>
</tr>
<tr>
<td>Vocational qualifications (yes:no % ratio)</td>
<td>8:92</td>
<td>17:83</td>
<td>10:90</td>
<td>12:88</td>
</tr>
<tr>
<td>Professional qualifications (yes:no % ratio)</td>
<td>50:50</td>
<td>25:75</td>
<td>60:40</td>
<td>44:56</td>
</tr>
</tbody>
</table>

Table 3.1: Focus group participant profile

3.2.2 DATA COLLECTION METHODS

The two main methods employed were semi-structured interviews and focus groups.

Employer Semi-Structured Interviews

Semi-structured interviews were employed to gain an organisational perspective of motivational issues in WBL. A semi-structured interview schedule (appendix 1), which consisted of a series of questions with related sub-questions and probes (King 1994), was developed to reflect the main factors within the model framework and related objectives. Thus, the schedule sought to elicit information regarding:

- Organisational definition and recognition of formal and informal WBL opportunities;
- Organisational perceptions of learning needs and values, instrumentality of WBL, goal setting procedures and evaluation of WBL;
- The perceived impact of motivational perspectives on the WBL process.
Semi-structured interviews, characterised by a flexible series of open-ended questions, were used as they offer the opportunity to explore the topic in some depth according to a loose framework, enabling both exploration of the organisation's subjective perception of motivation in WBL and also important issues not contained in the interview schedule to be raised (Oppenheim 1992, Silverman 1993, King 1994). Such an approach was desirable given the lack of research in the area and the exploratory nature of stage one of the research. Time available for interviews with participants was inevitably constrained as is typical in organisational research, thus semi-structured interviews were utilised instead of depth interviews as they retain the spontaneous and flexible nature of depth interviews yet the more directive approach allows them to be more tailored for time purposes.

The initial interview schedule was piloted prior to full implementation in order to test the effectiveness of the interview schedule to elicit the required information and the flow of the questions (Silverman 1993). Three pilot interviews were conducted with senior management level employees within a Higher Education institution. Participants were asked to comment on the flow and content of the questions and minor modifications were made to the overall schedule. As recommended by King (1994), the schedule started with more descriptive questions regarding developmental policy. The main three interviews were then conducted using the modified schedule (appendix 1).

**Employee Focus Groups**

Focus groups were used to explore employee perspectives of motivational issues in WBL. The interview schedule (appendix 4) centred on factors consistent with the initial framework of motivation developed in chapter 2 and the importance of organisational context, as follows:

- Individual definition and recognition of formal and informal WBL opportunities;
- Individual perceptions of their learning needs and values, instrumentality of WBL, their learning goals;
The perceived nature of the organisational context and its perceived effects on WBL, including the structure of WBL schemes.

Focus groups were employed as they are recommended as a research tool to gather insight into areas where research is sparse and hence little is known about an area (Merton 1987, Frey and Fontana 1993, Steyaert and Bouwen 1994, Churchill 1995), and in particular to explore the way that individuals think and feel about a subject (Krueger 1994). Indeed, focus groups have been advocated as a good method for exploring motivation (Morgan and Krueger 1993). Furthermore, focus groups have been particularly praised for allowing fuller exploration of ideas, through 'snowballing', that is, group discussion and exposing participants to novel ideas and concepts that may contrast or compare with their own perspective, that may not otherwise have been possible in an individual interview (Steyaert and Bouwen 1994, Churchill 1995). This is particularly beneficial as individuals in 'real life' are continually interacting with others and often develop perspectives through such interaction, focus groups offering a more 'natural' environment than individual interviews (Krueger 1994, Steyaert and Bouwen 1994). Artificial isolation of individuals may inhibit the exploration of an individual's perspectives (Krueger 1994). WBL, therefore, seems particularly suited to group investigation as it occurs mainly within a group context. This applies both to informal WBL, where individuals may learn from one another through observation or actual instruction in the course of their daily work, and to formal WBL, where training is delivered to groups of employees, often on the organisation's premises, and involves group discussion and evaluation.

When utilising focus groups it is advisable to avoid extremely sensitive topics that would inhibit disclosure among participants. In particular, Albrecht et al (1993) highlight the threat to the validity of focus group data arising from participants responding with socially desirable responses when sensitive topics are used. However, it has been suggested that there are only very few situations that are too sensitive to be discussed in a group context (Churchill 1995). Indeed, Morgan and Krueger (1993) suggest that in practice most participants are willing to discuss a great range of sensitive issues. WBL, however, was deemed as a non-threatening subject to be discussed in a
group context, particularly as participants were invited to talk about the subject in a general way, any personal information was collected via self-report personal profile questionnaires (appendix 2).

**Pilot focus groups**

Pilot focus groups are essential to ensure that the main focus groups run smoothly and that the desired information is collected (Silverman 1993, Krueger 1994, Churchill 1995). Therefore, two pilot focus groups were conducted prior to the main study.

An interview schedule (appendix 4 for final schedule used) was devised detailing a series of open-ended questions, which is recommended as a useful guide for the moderator conducting the focus groups (Krueger 1994, Churchill 1995). An initial schedule was developed to reflect the research aims and objectives, using the model framework and existing literature as a guide. The first pilot focus group was conducted with 6 employees of a Higher Education establishment, committed to a staff development program, to test the effectiveness of both the interview schedule to elicit the required information and the logical sequence and flow of the questions. Participants were asked to comment on the questions and personal profile questionnaire (see appendix 2 for final version) at the end of the focus group. Minor modifications were made to the sequence of questioning and the personal profile questionnaire.

A second focus group was then conducted with 8 employees of a financial institution to assess:

- The efficiency of the revised interview schedule;
- How the group composition and size affected group interaction;
- The logistics of conducting the focus group in a work-based setting.

Only one significant problem was highlighted relating to the optimum size of the focus group. The recommended size of focus groups ranges tremendously from 4-12 individuals, although guidelines of 8-12 people (Churchill 1995) and 6-10 people have been suggested (Steyaert and Bouwen 1994). However, it has been agreed that there should be a balance between small groups, who may be dominated by one individual, and large groups, where participants may
become bored and frustrated while waiting for their turn to speak (Krueger 1994). As a result of this second pilot focus group it was decided that there should be no more than 6 individuals in each group. With this particular subject it was found that participants each had quite a lot to say and when there were 8 participants there was either not enough time to allow each person to say all that they wished or participants were becoming frustrated at having to wait their turn. It was felt that a focus group composed of approximately 6 individuals would provide a good balance between allowing the group enough time to express ideas without others getting bored and still retaining enough diversity of perceptions within the group.

A further advantage of these pilot focus groups was that the moderator became familiar and comfortable with the structure and content of the questions. This is advisable as it is important for the moderator of a focus group not only to be viewed as competent by participants but also to be able to manipulate the structure of questions to reflect participants’ responses and be able to exercise flexibility within the focus group with confidence (Krueger 1994, Churchill 1995).

Having conducted these two pilot focus groups and accommodated the necessary modifications the main study was implemented.

**Main Focus Groups**

Six work-based focus groups were conducted to explore individuals’ perceptions and participation in WBL, 5 of these groups were composed of 6 participants and 1 group composed of 4 participants (due to participant drop-out immediately prior to data collection). Two focus groups were conducted within each organisation. There are no definitive guidelines regarding the number of focus groups that should be conducted in any one study, although a minimum of three groups has been suggested (Krueger 1994). The only available guidelines suggest that focus groups are continually reviewed as the research is being conducted, if additional focus groups do not add further insight to that gained by previous groups then the focus groups should cease (Churchill 1995). In the present study focus groups were continuously monitored. Patterns in participants’ responses could be identified after the first four focus groups, and the two further groups conducted with a third organisation further strengthened these findings. As these two focus groups
confirmed the findings of the previous groups and did not substantially add anything further it was appropriate to bring this stage to a close.

The focus group moderator used the interview schedule (appendix 4), the development of which is described above, as a guide for questioning. The schedule was composed of a series of pre-determined, open-ended questions and appropriate prompts, as advised by Churchill (1995) and Krueger (1994). Although this schedule was pre-determined, it should be noted that a certain amount of flexibility in this schedule was required due to the exploratory nature of this stage of the project.

The author acted as the moderator of the focus groups herself. It is noted that moderators of focus groups should have appropriate experience and have certain skills as described by Greenbaum (1988) and Morgan and Krueger (1993), including attentiveness and sensitivity to participants’ needs. In response to this concern, the current moderator has received training in interview techniques, has had prior experience of interviewing and the pilot focus groups enabled the moderator to practice moderating the groups. Furthermore, Morgan and Krueger (1993) stress that a professional moderator is not necessary, when projects are exploratory and hypotheses are being developed it is more important to utilise a member of the research team who is highly familiar with the research objectives.

3.2.3 PROCEDURE

Organisations that were appropriate for inclusion in this research were identified and approached through a telephone survey. A draft protocol (appendix 5) was forwarded to them for their consideration and three organisations agreed to take part. A representative of the organisation was briefed in the inclusion and exclusion criteria for selection of focus groups participants and employees were invited by each organisation’s representative to participate according to these criteria. Focus groups were set up at a time mutually convenient to the researcher, employer and employees concerned.

Focus groups took place at the employee’s place of work in appropriately sized rooms. As these rooms were designed for training and/or conferences they could appropriately accommodate a
group of individuals for a discussion group, containing the necessary tables and chairs. Tea and coffee facilities were also provided by the organisation. Chairs were placed in a circle prior to the participants entering the room.

Candidates were given a short introduction to the general purposes of the study. Participants were informed that the research was sanctioned by an external organisation and that the moderator had no connection with the organisation itself, as recommended by Krueger (1994). Participants were assured of the confidentiality and anonymity of their responses to all questions and were assured that although the organisation would receive a general report of findings from all the focus groups they would not have access to tapes or questionnaires and would not be able to identify individual responses (Oppenheim 1992, Silverman 1993). Participants were told that the researcher was interested in their opinion of the topic under study and that there were no right or wrong answers, in fact alternative explanations were positively encouraged by the researcher, as recommended (Krueger 1994).

All participants introduced themselves at the beginning of the focus group as a way of stressing the similarities among them in terms of occupational level. Participants then completed the personal profile (appendix 2). Questions contained on the personal profile also included items relating to learning within the organisation, and these were included at the beginning of the focus group to encourage participants to start thinking about WBL. All focus groups were recorded with the participants' permission. The researcher explained what would happen to the tape recordings upon completion of the focus groups and confidentiality and anonymity were again emphasised. The focus groups lasted approximately 1.5 hours, which is typical of focus groups (Churchill 1995), and this time had been agreed with the employer prior to the focus groups being conducted. At the end of each focus group participants were encouraged to ask any questions that they may have in relation to the research.

Interviews were set up at a mutually convenient time for the training manager, employer and researcher. Interviews took place at the participants' place of work in the same room as the focus groups with employees. Refreshments were provided by the organisations concerned. Interview participants were given a short introduction to the general purposes of the interview, what the
results would be used for and were assured of the confidentiality and anonymity of responses as recommended (Oppenheim 1992, Silverman 1993, King 1994). The interviews lasted approximately 45 minutes, and this time had been previously agreed with the organisations. All interviews were tape-recorded with permission (Oppenheim 1992, Silverman 1993).

Following completion of focus groups and interviews the researcher noted her first impressions to build up a set of field notes (Oppenheim 1992).

3.2.4 ANALYSIS

Template analysis (also called code book analysis and thematic coding) was used to analyse both the interview and focus group data (Knodel 1993, Ritchie and Spencer 1994, King 1994, 1998). The first recommended step with such an analysis is for the data analyst to go through a process of familiarisation with the interview transcriptions (King 1998). This was achieved through the researcher conducting the interviews/focus groups, transcribing the interviews/focus groups and checking the transcriptions for errors. Transcripts are recommended as a basis for improving the reliability of data analysis as they ensure that the exact wording is used and kept for future records (Silverman 1993).

In step two the text was analysed according to the use of a template of codes, representing categories or themes relevant to the study. These codes were initially based on the framework of motivation developed in chapter 2 (as were the interview and focus group schedules) and reference was also made to the initial field notes, however, the codes were revised as the analysis progressed. It has been suggested that this analysis can be placed between quantitative content analysis and qualitative grounded theory (King 1998). It is a flexible approach responsive to the data through the process of defining and redefining codes, whilst building upon an existing framework. As the analysis progresses codes can be revised by insertion of new codes, deletion of redundant codes and changing the scope of existing codes where they may be redefined at broader or more specific levels.

The resultant data analysis outcomes were interpreted according to the model framework in terms of factor definition, proposed links and relationships between factors and a comparison between
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the employer-employee perspectives and different organisations. A modified model was developed that was used for further exploration in stages two and three of the project.

3.3 STAGE TWO: DEVELOPING FACTORS IN THE WBL-MOTIVATION MODEL

Following completion of stage one, a modified model was produced and the second phase of this project aimed to further develop the factors identified within this model. Having explored employer-employee perspectives and associated congruence/dissonance issues, stages two and three focused exclusively on the employee perspective in order to develop the micro-model further. Stage two aimed to address thesis objective five, that is to explore the proposed factor structure (and hence definitions) of each factor within the model (prior to testing of relationships between factors in stage three). The factor structure of five distinct areas, as defined by the model, were to be explored:

- Valued WBL outcomes;
- Instrumentality of WBL;
- Employee perceptions of the organisational approach to WBL;
- WBL goal setting processes;
- Outcomes of the WBL-motivation process.

It was necessary to design a tool to allow further development of model factors. Thus there were two principle outcomes for this stage of the research:

- To construct a tool to enable further development and testing of model factors;
- To further explore and test the factor structure and definitions of model factors.

3.3.1 PARTICIPANTS

Two sets of participants were included in the two main piloting stages of the project. Sample one was composed of 100 participants (following deletion of 2 participants resulting from pre-data
analysis checks – section 3.3.4.4), who were all part-time students on business-related courses (at HNC/D and undergraduate level). Convenience sampling (Saunders et al. 1997) was used in order to recruit participants to the study, where permission was initially sought from tutors to visit students in class time. It was ensured that all participants were in full-time employment in the South Wales region in order to increase the likelihood that the sample would be representative of the target population. This sample was composed of 36% in public services, 25% in the financial sector, 24% in the retail sector, 9% in the manufacturing sector, 3% in the media sector, 2% in the leisure and tourism sector and 1% in the legal sector.

Sample two was composed of 98 participants (following deletion of two participants following pre-data checks – section 3.3.4.4), who were employees of the two organisations involved in this stage of the project. Both organisations were Small to Medium-sized Enterprises (SMEs), where organisation one was a local manufacturing organisation (20 employees) and organisation two was a local leisure service provider (152 employees). This cohort of participants completed a revised version of the questionnaire (appendix 6), where modifications were based on the results of sample one. Questionnaires were distributed via the internal mailing system of both organisations, hence involving an element of self-selection in the composition of the sample. This sample was also used in stage three model testing; hence full details of organisation and participant selection are given in section 3.4.1 below.

A summary of demographics for samples one and two is given in table 3.2. It is noteworthy that both samples are comparable in terms of gender mix and length of time working for the organisation. However, although all age and socio-economic group categories are covered in both samples, sample one is biased towards lower age categories and the majority of participants are in the C1/C2 socio-economic group, which is probably a product of using a part-time student group.
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#### Table 3.2: Demographic details for samples one and two in stage two

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Sample 1 (N=100)</th>
<th>Sample 2 (N=98)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>60% male</td>
<td>61.46% male</td>
</tr>
<tr>
<td></td>
<td>40% female</td>
<td>38.54% female</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29% 18-24 years</td>
<td>12.5% 18-24 years</td>
<td></td>
</tr>
<tr>
<td>55% 25-34 years</td>
<td>37.5% 25-34 years</td>
<td></td>
</tr>
<tr>
<td>11% 35-44 years</td>
<td>25% 34-44 years</td>
<td></td>
</tr>
<tr>
<td>4% 45-54 years</td>
<td>16.67% 45-54 years</td>
<td></td>
</tr>
<tr>
<td>1% 55+</td>
<td>8.33% 55+</td>
<td></td>
</tr>
<tr>
<td>Socio-economic group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(see appendix 10 for key)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1% in group A</td>
<td>14.58% in group A</td>
<td></td>
</tr>
<tr>
<td>4% in group B</td>
<td>43.75% in group B</td>
<td></td>
</tr>
<tr>
<td>79% in group C1/C2</td>
<td>34.38% in group C1/C2</td>
<td></td>
</tr>
<tr>
<td>18% in group D</td>
<td>7.29% in group D</td>
<td></td>
</tr>
<tr>
<td>Length of time in organisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean = 5.45 years</td>
<td>Mean = 6.52 years</td>
<td></td>
</tr>
<tr>
<td>Std Dev. = 5.05</td>
<td>Std. Dev = 6.842</td>
<td></td>
</tr>
</tbody>
</table>

#### 3.3.2 Data Collection Methods

In order to test the model of motivation and WBL devised at the end of stage one, a measurement tool in the form of a questionnaire with Likert-type scaling was developed. Questionnaires are a widely recognised and popular tool for the assessment of motivational concepts and models. For example, Locke et al (1988) and Renn et al (1999) successfully assessed goal acceptance and goal setting using questionnaires. Further, Boshier and his colleagues (e.g. Boshier and Collins 1983) developed and used a questionnaire to measure the motivational orientation towards adult education.

The questionnaire (appendix 6) was designed to reflect the key factors identified by the model framework, stage one results serving as a basis for questionnaire construction. It should be noted that to counter order effects several versions of the questionnaire were distributed, where each version presented the items in a different random order. For ease of reference the questionnaire in appendix 6 presents the items ordered according to each factor. There were four main stages to questionnaire development:
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- The initial construction used stage one focus group material and the motivational framework to construct a number of scales. In addition, examples of motivation measurement in the literature (e.g. Work Preference Inventory, Amabile et al 1994; Education Participation Scale, Boshier and Collins 1983; Learning Diagnostic Questionnaire, Honey and Mumford 1990) were examined to gain insight into acceptable measurement practice, presentation and wording. Examples of IIP assessments were also examined for measurement techniques, wording and presentation styles, including attendance at an IIP Advisors course;

- The questionnaire was initially piloted within a panel composed of five expert judges in the field (academic and business), where scale content, measurement, wording and presentation were discussed;

- The questionnaire was piloted a second time with a larger scale sample (N=100) and results were subject to Principle Components Analysis (PCA);

- The questionnaire was tested a third time with a further sample (N=98) and results were subject to Alpha Factor Analysis (AFA).

These four stages were aimed at addressing three main issues in the composition of this tool: conceptual definition; dimensionality; reliability (Hair et al 1998).

3.3.2.1 Conceptual definition

It has been suggested that motivation is notoriously difficult to measure and that no really satisfactory scales exist (Guest and Conway 1997). Indeed, chapter 2 highlighted the problem of inter-study comparisons attributable to inconsistency in the definition and, hence, measurement of motivation. It is important that scale definitions are driven by a clear theoretical basis (Hair et al 1998). The current questionnaire was based on a conceptual framework that clearly measures different elements of motivation in the context of WBL. This model is based on a framework (Locke and Henne 1986, Locke 1991) that itself was developed in recognition that many 'theories' of motivation were addressing different parts of the same process. This framework was further developed in stage one, establishing its relevance to the WBL-motivation process and providing
more in-depth and distinct definitions of each stage in the process. The modified model of the WBL-motivation process served as a useful basis for identifying the factors to be assessed. Thus, five distinct scales were initially constructed as indicated in the model:

- WBL valued outcomes;
- Instrumentality of WBL;
- Perception of organisational approach to WBL;
- WBL goal setting processes;
- Outcomes of WBL process.

This stage of scale construction is particularly concerned with content validity focusing on the rationale behind item selection (Hair et al. 1998). Thus, two strategies were employed to ensure that items selected were good indicators of the scales under construction.

Firstly, following factor definition, items were constructed utilising the wording and examples generated from stage one focus groups. The use of techniques such as interviews and focus groups is common practice in questionnaire construction and is strongly recommended by a number of authors (Oppenheim 1992, O'Brien 1993, King 1994). These techniques can aid questionnaire construction in two key areas (Oppenheim 1992, O'Brien 1993, Kinney et al. 1995):

- Through informing the content and wording of items, where interview tapes can provide a 'rich store of attitudinal and perceptual expressions';
- Through providing real-life examples of the phenomena under study that can also be incorporated into the items.

Thus items were grounded in real-life examples generated from stage one focus groups.

Secondly, an initial pilot questionnaire was constructed, consisting of 99 items, and tested within a panel composed of five researchers in the organisational field (both commercial and academic). Content validity of questionnaires is commonly assessed through use of a panel of judges.
particularly in preliminary stages of development (Rosenthal and Rosnow 1991, Hair et al 1998). Such a process has been used in a LLL context by Livneh and Livneh (1988) where content validity of a scale was assessed by a panel of 9 judges, who commented on item relevance and content. In the current project, the five judges were initially asked to independently indicate which items represented each scale. Those items where there was poor agreement between judges on what factor was being measured were rejected. The utility of the remaining items as indicators of the underlying scales was then discussed. Furthermore, the readability, comprehension, wording, order effects and response variation were also discussed by the panel (Frey and Fontana 1993, Guest and Conway 1997). Following deletion of items and any rewording, the resultant questionnaire was piloted a second time as described later.

Although, the measures described above aim to increase confidence in content validity, it is recognised that a certain amount of variance in the results will be due to method variance, that is, variance due to the method employed (e.g. questionnaire, interview or observation) rather than the content of the method (Neale and Liebert 1986). Thus, by relying on a questionnaire to assess the underlying factors in the model, both in stages two and three, the relationship amongst variables may be inflated by the common method used. However, confidence in the results can be gained from two sources. Firstly, in stage one different methods, interviewing and focus groups, were used to gain information about the same variables and, secondly, there is convergence between this project and other independent studies, supporting the current findings as being due to content rather than method variance alone (Maurer and Tarulli 1994). This issue is revisited in the discussion chapter.

3.3.2.2 Dimensionality

It is vital that scales are unidimensional if they are to be used in further statistical analysis (as in stage three of the thesis) - (Oppenheim 1992, Hair et al 1998). Indeed, an underlying assumption and essential requirement when using summated scales in analysis, particularly Likert scaling (as in stage three), is that they are unidimensional (Hair et al 1998, Trochim 2001c). Thus, following the initial pilot focusing on content, the questionnaire was then subject to factor analysis to determine the underlying structure (dimensionality) of the scales in two different samples. For
example, it needed to be determined whether the WBL valued outcomes scale was unidimensional or whether it was composed of two factors, work development outcomes and personal development outcomes.

In questionnaire construction it is vital that the sample used to initially construct and test the questionnaire should reflect the potential variance to be expected in the target population (Comrey 1978, Ferguson and Cox 1993). This is particularly important given the potential problems of time and cohort effects in cross-sectional research (Neale and Liebert 1986, Rosenthal and Rosnow 1989, Maurer and Tarulli 1994). In recognition of this, the dimensionality of scales was explored initially with a sample of part-time students who were all in full-time employment and, secondly, with a sample obtained from employees within the two organisations used in the final model testing. Thus the samples used always reflected a full-time employed population in the South Wales region representing the target audience. Two samples were used to test factor structure, as it is vital to confirm the presence of factors in a second sample, where the theoretically proposed number of factors from the initial piloting was used as a basis for establishing the number of underlying factors in the second piloting (Hair et al 1998). In addition, a further benefit was gained as the second sample was comprised of participants involved in stage three, meaning that factors were demonstrated to be relevant to the organisations used for model testing.

3.3.2.3 Reliability

Several items were generated that related to each of the factors identified, with the aim of producing a composite scale score for each individual. This is recommended when testing models as a means of increasing the reliability of measuring factors by reducing the amount of error specific to any one item and reducing reliance on any single measure of a concept (Cronbach 1990, Oppenheim 1992, Hair et al 1998). Furthermore, use of multi-item scales enables richer descriptors of the factors to be used by capturing multiple facets of the factor under study (Bryman and Cramer 1997, Hair et al 1998). Thus, as described above, consideration was given to the optimum items that underpinned the factors being studied. The focus group data (stage one) was invaluable in determining the aspects of factors that required measurement. Such item selection
is a crucial step in questionnaire construction as items must be good indicators of the factors under study if problems later in analysis are to be avoided (Comrey 1978, Hair et al 1998).

In particular, the reliability of factors is dependent on how well individual items on each scale are correlated (Gorsuch 1988, Tabachnick and Fidell 1996). Thus it was also important to assess the internal consistency of scales at this stage (measured by squared multiple correlations, SMCs), where scales measuring a single underlying concept should be composed of items with good inter-relationships with each other (Oppenheim 1992, Nunnally and Bernstein 1994, Tabachnick and Fidell 1996, Hair et al 1998). Indeed, reliability is a necessary precondition to validity (Oppenheim 1992).

In terms of the number of items for each scale, Hair et al (1998) argue that a single item can be used as a measure of a particular factor (although by no means optimum) and two items are the minimum number of items required to make up a scale. Indeed, there are precedents within the motivation literature for the use of one or two items in factor measurement. For example, Tannenbaum et al (1991) used a 2-item scale for the measurement of satisfaction, Kanfer et al (1994) used two items to assess goal commitment, and Guest and Conway (1997) used one item to measure satisfaction. It is worth noting that research investigating several scales at once typically tends to use scales with a small set of items. For example, Maurer & Tarulli (1994) investigated employment development activities, using a similar method to the one adopted by this project; utilising a questionnaire composed of several different scales, with 5-point Likert scaling where each scale consisted of three items. Similarly, Duarte (1995) investigated work values using a multi-scale questionnaire, where each scale consisted of five items. Indeed, when a project attempts to measure several factors at once it is necessary to reduce participant burden as much as possible, for example by reducing (or keeping to a minimum) the number of items in each scale without losing the essence of the scale.

Thus this thesis sought to increase reliability by using multi-item scales, whilst balancing this with the reduction of participant burden in terms of the number of items per scale.

3.3.2.4 Questionnaires and Likert Scaling
The questionnaire developed within this study uses a Likert-type scaling method (Rosenthal and Rosnow 1991). For each item on the questionnaire participants were asked to indicate their level of agreement on a five-point numerical rating scale (where 1 = strongly disagree to 5 = strongly agree). For each scale on the questionnaire item scores are summated to achieve a total score for that scale (higher scores indicating a more positive perspective). Items representing each scale were selected using factor analytic techniques based on inter-item relationships (as described in this stage of the method).

The use of Likert-type scaling to assess individual perceptions is a well-established method in the organisational psychology literature. For example, Likert-type scaling has been used in the measurement of attitudes to work (Kinney et al 1995), burnout (Enzmann et al 1998) and more recently team climate (Kivimaki and Elovinio 1999). There is evidence of wide usage of such methods in the motivation literature. For example, Duarte (1995) used Likert-type scaling techniques to measure work values. Most importantly these methods are popularly used in the context of motivation and learning. For example, Noe and Schmitt (1986) used 5-point Likert-type scaling to measure motivation to learn. In the LLL literature, Livneh and Livneh (1988) developed their own 36-item questionnaire, due to a lack of existing assessment tools, to assess LLL characteristics using Likert-type scaling. Thus the use of Likert-type scaling to differentiate between the varying degrees of individual perceptions of motivation is supported (Locke et al 1988). Indeed, Guest and Conway (1997) argue that if respondents are expected to be reasonably aware of the issues under study then scale measurement is an acceptable approach.

It should be noted that a number of different points may be used on response scales. Odd-numbered scales (e.g. three-point, five-point, seven-point) contain a middle value (often labelled 'neutral' or 'undecided'), whereas, even-numbered scales (four-point, six-point) have no middle 'neutral' point (Trochim 2001c). A number of advantages can be posited for each response scale. For example, a seven-point scale allows for greater distinction between the intensity of individual opinions. A six-point scale forces individuals to indicate whether they generally agree or disagree with the items (Churchill 1995). However, neither odd-numbered nor forced-choice scales have been found to be superior in terms of reliability (Churchill and Peter 1984).
Therefore, it has been suggested that the choice of scale should be based on the nature of the problem under study, the planned administration of the tool and participant characteristics (commitment, experience and ability) – (Churchill 1995). Accordingly, the choice of the five-point response scale in this study was based on a number of issues:

- Five-point response scales are a well-established approach and have been used with success in many studies;

- Five-point response scales can be assumed to be familiar to participants given the widespread usage of such scales. Churchill (1995) advocates the use of culturally familiar scales in research. Familiarity with scales can reduce participant burden when completing longer questionnaires;

- A five-point response scale produces a balance between being able to differentiate between the intensity of individual opinions/feelings, whilst not over burdening the participant with too many response options;

- The use of a middle 'neutral' point allows individuals who truly do not have a clear opinion to express this – a point that was strongly emphasised by the first cohort of participants (N=100) completing the pilot questionnaire.

Finally, Likert-type scaling was also deemed desirable as the production of summated scale scores for each factor is advantageous for the further planned quantitative analysis in stage three (that is, hierarchical multiple regression) in terms of unidimensionality and reliability discussed above.

3.3.3 PROCEDURE

The first cohort of pilot questionnaires was gathered over a period of several weeks from the population of part-time students undertaking business-related courses. Class tutors were approached initially and following a brief outline of the project were asked for their permission to address their respective classes and complete questionnaires in class time. Accordingly, participants were contacted at the start of their class time. A brief introduction to the project was given, including the main purpose of the project, what the results would be used for and that the
questionnaire was aimed initially at full-time employees only; confidentiality and anonymity were also guaranteed. Those who agreed to participate completed the questionnaire in the class time in the presence of the researcher, participants were asked not to confer with their neighbours regarding questionnaire responses. Following completion of the questionnaire participants were asked to comment on the questionnaire and all comments were noted. In particular, wording, presentation and measurement issues were addressed, where participants were asked to give their opinion about the type of measurement scale. At the end of the session participants were encouraged to ask any questions that they may have in relation to the research.

The questionnaire responses for sample one were analysed (see section 3.3.5) and the questionnaire was modified accordingly. Sample two then completed this revised version of the questionnaire (appendix 6).

Organisations were selected via an established consultative committee between local SMEs and an Academic Institution and existing research links. A presentation was made to interested groups and volunteers were sought. Two organisations volunteered to participate in the study. Neither organisation was LiP registered, although organisation 2 was planning to initiate the LiP process in the future, and both organisations were undergoing a review of their staff development procedures. Contact was made with an organisational representative to discuss the questionnaire and co-ordinate distribution, in organisation one this was an administration representative, in organisation two this was the research officer.

Questionnaires were distributed using the internal mailing system and included a covering letter (appendix 7) from each organisation explaining the purposes of the project and that the project had the full support of the organisation. To guarantee participant confidentiality and anonymity responses were returned directly to the researcher, thus a stamped addressed envelope was included with all questionnaires. Participants were invited to make comments at the end of questionnaires. In collaboration with the two organisations, a deadline was set for return of the questionnaires. The response rate was assessed at this deadline and a follow-up letter was sent to all employees in both organisations requesting that any outstanding questionnaires be completed and returned, a second deadline was accordingly set.
Following collection of all completed questionnaires, responses were subject to data analysis described in the following section.

3.3.4 DATA ANALYSIS

Exploratory Factor Analysis (EFA) was used to determine the factor structure of the scales under study, as recommended by a number of authors (Cattell 1988, Gorsuch 1988, Cronbach 1990, Nunnally and Bernstein 1994, Tabachnick and Fidell 1996, Hair et al 1998). In the study of dimensionality, the distinction between EFA and Confirmatory Factor Analysis (CFA) is not based on a dichotomy but on a continuum (Velicer and Jackson 1990, Nunnally and Bernstein 1994). Research towards the confirmatory pole of the continuum (CFA) is characterised by increasingly sophisticated theory (and well-defined hypotheses) and knowledge regarding the structure of the underlying dimensions of the data (Gorsuch 1988, Nunnally and Bernstein 1994). EFA, however, should not be without a theoretical basis, as it is vital to provide some guiding principles to select items for inclusion in the analysis (Nunnally and Bernstein 1994, Hair et al 1998). In this thesis the model developed in stage one was used as a guide regarding the possible number and nature of factors in the model, as well as a guide to item generation on the questionnaire. However, EFA does allow for a number of relatively unexplored dimensions to be investigated and the further development of theories regarding the major factors within the model (Gorsuch 1988), and is the recommended initial step in the analysis of dimensionality in scale construction (Hair et al 1998). EFA helps to develop theory (and accompanying hypotheses) about the number and nature of factors. CFA seeks to test and confirm these theories and hypotheses. Thus stage one can be firmly placed near the exploratory pole of the continuum, exploring a tentative model and giving shape to the factors within that model. The two factor analyses in stage two advance the research towards the confirmatory pole of the continuum by exploring the emerging dimensions and further refining factor definitions. The resultant model represents those factors that are hypothesised to exist in the WBL-motivation process based on the outcomes of stages one and two.

3.3.4.1 PCA and FA

Both Principle Components Analysis (PCA) and Factor Analysis (FA) were used at this stage of the thesis. These are similar procedures with the aim of exploring the factor structure of the model.
The main difference between PCA and FA lies in the computation. In PCA all variance in the observed variables is analysed. In FA only the shared/common variance (estimated by the communalities) is analysed. That is, an attempt is made to estimate and eliminate the variance due to error (in measurement) and variance that is specific to each variable (error and specific variance are commonly referred to as unique variance) — (Velicer and Jackson 1990, Tabachnick and Fidell 1996, Hair et al 1998). Figure 3.2 illustrates this difference.

![Diagram of common and unique variance](image)

**Figure 3.2: Common and unique variance (adapted from Bryman and Cramer 1997)**

PCA would analyse all the variance, that is, the shaded and the unshaded areas. FA would analyse only the common variance represented by the shaded areas (Bryman and Cramer 1997).

In sample one, Principal Components Analysis (PCA) (dating back to Pearson 1901 and Hotelling 1933) was utilised to determine the likely nature and number of factors formed by the item set. PCA is recommended as the method of initial extraction for analysis of data in questionnaire construction as it is a robust technique that can reveal a great deal about the probable number and nature of factors (Kline 1994, Tabachnick and Fidell 1996), and produces a set of uncorrelated dimensions among study variables (Manly 1986, Kline 1994). PCA seeks to explain the variability among variables (Jackson 1991), and is proposed to provide a solid foundation upon which to base further factor analyses (Tabachnick and Fidell 1989).
In sample two, Factor Analysis (FA) was conducted on responses to the revised version of the questionnaire to identify similarities or differences between the factor structures suggested by the initial PCA and that indicated in sample two through FA. In addition, FA was utilised to investigate the internal consistency of the factors (as recommended Nunnally and Bernstein 1994). Unlike PCA, FA seeks to explain the co-variance between variables (Jackson 1991, Tabachnick and Fidell 1996), where only the variance that each observed variable shares with other observed variables is used in the analysis (Bryman and Cramer 1997, Tabachnick and Fidell 1996). The Alpha estimation procedure (Alpha Factor Analysis - Kaiser and Caffrey 1965) was used as it focuses on psychometric inference aiming to establish a model that would be representative of the universe from which the variables were sampled, not just the ones for producing the data being analysed, and is concerned with maximising the reliability of factors (Kaiser and Caffrey 1965, Kim and Mueller 1978, Jackson 1991, Norusis 1992a, Tabachnick and Fidell 1996).

In Alpha Factor Analysis (AFA) the communalities (estimates of the shared/common variance among variables) are either known or estimated before the process begins but the number of factors does not have to be specified in advance (Jackson 1991). In practice, SPSS/PC+ (v. 6.0) uses the squared multiple correlations (SMCs) as the initial estimates of communalities (Tabachnick and Fidell 1996), which are lower bound estimates for the communalities (Jackson 1991, Nunnally and Bernstein 1994) and may be poor estimates where there are few variables (Tabachnick and Fidell 1996). It should be noted that there is not a recognised solution to the problem of which communality estimates to select, however, it is recognised that the FA solution is necessarily influenced by the original estimates of communalities (Comrey and Lee 1992). Alpha factors are invariable in relation to scaling, the same factors can be found regardless of the units of measurement of variables (Kaiser and Caffrey 1965, Jackson 1991).

There are a number of important issues to consider when using PCA and AFA, namely, sample size, type of measurement scales and data screening. These issues are discussed below.

**3.3.4.2 Sample Size**

Sample one was composed of 100 participants following elimination of 2 subjects, and the second sample size was 98 following elimination of 2 subjects, both of which conform to the minimum
sample size recommended for Principle Components Analysis (PCA) and Factor Analysis (FA) (Kline 1994, Hair et al 1998). Sample sizes for similar studies are usually affected by pragmatic considerations, which typically means that in practice research sample sizes range from just under 100 to about 350 (Zwick and Velicer 1986), and this study fits into the lower end of this typical range.

A number of other heuristics are available to determined sample size, for example, subject to variables ratio (recommendations ranging from 2:1 to 10:1), subject to expected number of factors ratio (recommendations ranging from 2:1 to 6:1) and variable to expected factors ratio (recommendations ranging from 2:1 to 6:1) (Ferguson and Cox 1993). Five separate factor analyses were conducted and all adhered to the recommended ratios above. However, it has been suggested that these ratios are less important when several items load onto a factor with a salient loading of 0.6 or above (Ferguson and Cox 1993). Indeed, in this study the salient loadings were often over 0.6.

3.3.4.3 Type of Measurement Scale

In both the PCA and AFA Likert-type scaling with five-point response scales (strongly agree to strongly disagree) were used. The use of Likert-type scaling for PCA and FA is supported by several authors (e.g. Comrey 1978, Ferguson and Cox 1993). Kim and Mueller (1978) suggest that the correlation coefficients are fairly robust with respect to the use of such measurement techniques. Indeed, the organisational psychology literature is replete with examples of research using such scales with PCA and FA, for example attitudes to employee turnover (Sheehan 1995), work attitudes (Kinney et al 1995), work values (Duarte 1995), burnout (Enzmann et al 1998), team climate (Anderson and West 1998), leadership (Avolio et al 1999, Alimo-Metcalfe and Alban-Metcalfe 2001) and Protestant Work Ethic (Tang 1993). Thus it seems reasonable to utilise such scales in this study.

3.3.4.4 Data Screening

A number of recommended data screening measures were undertaken:

- Data entry errors and missing data screening;
• Detection of outliers;

• Assumption of normality;

• Factorability of the correlation matrices and adequacy of PCA and AFA.

The results of these data screening measures are presented in the appendices (appendix 8 for the initial PCA and appendix 9 for the second AFA). The reader should note that the data screening stage was satisfactory, although 2 subjects from sample one and 2 subjects from sample two were eliminated on the basis of their responses, and the assumptions of normality were satisfactorily met.

Following pre-analysis checks, PCA and AFA were used to explore the internal structure of each hypothesised scale, which involved:

• Determining the number of factors formed by the items on each scale using two heuristics;

• Extraction of those factors (referred to hereafter as the 'solution');

• Assessment of the extracted solution against specific criteria.

3.3.4.5 Determining the Number of Factors

The model developed in stage one gave an indication of the potential factors that might exist in the WBL-motivation process. This theoretical guide to the number and nature of factors was supported in the EFA by the use of two heuristics: the Scree Test and Parallel Analysis.

The optimum number of factors was initially evaluated using the Scree Test Criterion (Cattell 1966) and Parallel Analysis (PA: Horn 1965). Many heuristics for when to stop factoring have been proposed (Jackson 1991, Ferguson and Cox 1993, Hair et al 1998), each having specific advantages and disadvantages. The Scree Test Criterion and PA were selected as they have been shown to be accurate in determining the number of factors (Zwick and Velicer 1986). The Scree Test has been hailed as reasonably accurate to within one or two factors (Ferguson and Cox 1993, Tabachnick and Fidell 1996), and has good empirical support (Velicer and Jackson 1990).
PA has been shown to be the most consistently accurate technique for determining the number of factors underlying a data matrix when compared to four other heuristics (Zwick and Velicer 1986), and has been recommended as the criterion of choice by a number of authors (Ferguson and Cox 1993, Wood et al 1996). At worst PA may slightly overestimate the number of factors (Zwick and Velicer 1986).

Furthermore, the use of two heuristics provides a higher degree of confidence than one alone, in particular PA was designed to complement the Scree Test by removing some of the subjectivity involved in determining where a break in the slope occurs (Jackson 1991), and using a combination of these two techniques is recommended (Zwick and Velicer 1986). In addition, where the number of factors is unclear, such as when the heuristics suggest diverse solutions, several PCAs will be performed and the adequacy of the resulting solutions examined using criteria outlined below (Tabachnick and Fidell 1996). Indeed, it has been recommended to explore one or two factors above and below the desired factor structure as a matter of routine (Zwick and Velicer 1986).

The Scree Test (Cattell 1966) involves plotting the eigenvalues against the corresponding factor number and the resulting ‘slope’ inspected for any obvious breaks. To determine where a distinct break in the slope occurs it is recommended that the point at which the slope begins to straighten be utilised (Kim and Mueller 1978, Jackson 1991). The subjective nature of this test is compensated for by use of PA.

Parallel Analysis (PA) involves contrasting the eigenvalues of Normally distributed, randomly generated variables with those of the data set, based on the same number of variables and subjects (Horn 1965). Components that have eigenvalues greater than the randomly generated values should be retained, those components with eigenvalues below the corresponding randomly generated values being no better than those that might be expected ‘by chance’. PA has been demonstrated as accurate for both PCA and FA (Zwick and Velicer 1986). The PA eigenvalues for this study were generated from the mean eigenvalues of 30 random data sets, the random data eigenvalues were then plotted on a Scree Plot and the point at which the PA line and Scree line crossed was noted.
It should be noted that, of the other available heuristics, the Latent Root Criterion (Kaiser 1960) is one of the most popular for determining the number of factors, being widely available through most popular statistical packages (Nunnally and Bernstein 1994, Tabachnick and Fidell 1996). However, this criterion was not used as it has been widely criticised by many authors for under/overextraction of factors (Gorsuch 1983, Zwick and Velicer 1986, Ferguson and Cox 1993, Nunnally and Bernstein 1994, Wood et al 1996, Hair et al 1998). Indeed it has been shown to be the least effective heuristic when compared to a number of others (Zwick and Velicer 1986). Although it should be noted that this heuristic could be useful for exploration, even though additional factors may be less reliable or less significant (Tabachnick and Fidell 1996). In addition, in terms of PCA, researchers have been warned against too readily accepting a one-factor solution as the 'correct' solution (Comrey and Lee 1992).

3.3.4.6 Assessing the Solution

Each PCA and AFA solution was evaluated using the main criteria described below, as recommended by a number of authors, including Norusis (1992a), Nunnally and Bernstein (1994), Tabachnick and Fidell (1996) and Hair et al (1998).

- **Criterion One** – Perhaps the most important criterion is that the solution makes theoretical sense (Nunnally and Bernstein 1994). Thus identified factors should be assessed in relation to the underpinning theory or model and factors that are too specific or too broad should be avoided, where factors should be assessed for triviality or as a useful addition to theory, complex enough to be interesting to the research without being over complex as to be uninterpretable (Comrey and Lee 1992, Tabachnick and Fidell 1996). The ultimate test of a factor can be assessed by replicating the solution in a second group (Tabachnick and Fidell 1996, Hair et al 1998).

- **Criterion Two** - Factor loadings indicate the degree to which the item represents the factor (Wells and Sheth 1971). Higher factor loadings suggests that the factor is well-defined by the items (Kline 1994, Tabachnick and Fidell 1996), the size of absolute factor loadings should adhere to a minimum of 0.4 for sample sizes of around 100 (Gorsuch 1983, Ferguson and Cox 1993), although absolute factor loadings of 0.3 and above are
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routinely accepted (Tabachnick and Fidell 1996, Hair et al 1998). Absolute factor loadings below 0.1 are assumed to be random variations from 0 (Gorsuch 1983). Where oblique rotation is used factor loadings within the pattern matrix (representing the unique relationship between factors and variables) should be interpreted, as the structure matrix (representing the simple correlations between variables and factors) is inflated when factors are well correlated (Tabachnick and Fidell 1996, Hair et al 1998). The signs of factor loadings are said to be arbitrary (Gorsuch 1983) and to have no intrinsic meaning in themselves (Kim and Mueller 1978). Signs for factor loadings have a specific meaning relative to the signs of other variables. Like signs indicate that variables on a factor are positively correlated and opposite signs indicate that the variables are negatively related (for example in a bi-polar factor) – (Hair et al 1998).

- **Criterion Three** – Solutions should adhere to **simple structure**, where several items have high factor loadings with each factor and only one factor has high factor loadings with each variable (Tabachnick and Fidell 1996). In the case of theoretically important items that load onto more than one factor, where large differences are found between the cross-loadings and one of the loadings is less than 0.4 deletion of the item is not warranted (Ferguson and Cox 1993). Retention of complex items (having factor loadings over 0.4 on two or more factors) is acceptable when they are important to the study, as long as the factor is mainly composed of pure factor items and the naming of the factor is based on these pure factor items (Comrey and Lee 1992). Indeed, in practice it is common to have items with high loadings on several factors (Hair et al 1998).

- **Criterion Four** - The **residual correlation matrix** (representing the difference between the reproduced correlation matrix and the observed correlation matrix) should be examined. By comparing the difference between the observed correlations and those estimated from the model under consideration the adequacy of the solution or how well the model fits the data can be evaluated (Becker 1996). In particular, the percentage of absolute residuals correlations over 0.05 is important to note - the smaller the residuals the better the model fits the data (Norusis 1992a). Residuals from PCA are likely to be larger than for FA (Nunnally and Bernstein 1994). In terms of FA, the average residual
should be as close to 0.03 as possible without compromising theoretical sense, and only a small proportion of residuals should be over 0.1 (Becker 1996).

- **Criterion Five** – The *patterns of inter-item correlations* reveals how well items on each factor are related to one another and items on other scales (Nunnally and Bernstein 1994). Items should be well correlated to items on the same scale and less well correlated to items on other scales. An initial examination of the correlation matrix will also help identify isolates – items that are not well correlated with any other items.

- **Criterion Six** - The *amount of variance and co-variance* explained overall and by each factor can also be examined to assess its importance (Tabachnick and Fidell 1996). Social Science research routinely accepts solutions accounting for approximately 60% of the overall variance (Hair et al 1998). Although smaller percentages of variance have been accepted, e.g. Kinney et al (1995) accepted 46.6% variance in construction of an attitude to work scale. Caution should be used when interpreting the amount of variance explained by each factor with oblique factors as the shared variability in oblique factors makes the assignment of variance to individual factors ambiguous, although these measures can give an indication of the importance of a factor (Tabachnick and Fidell 1996). In such cases Tabachnick and Fidell (1996) suggest the use of the Sum of Squared Loadings (SSLs) as an indicator of the importance of a factor.

- **Criterion Seven** – The *communalities* of the items (percentage of variance in item accounted for by factor solution) were also examined to establish if variables were well defined by the solution (Tabachnick and Fidell 1996). It is desirable that the majority of communalities are over 0.4, suggesting that the variable is adequately defined by the solution, although values of above 0.3 are often accepted (Tabachnick and Fidell 1996).

The AFA solutions were also evaluated against the following additional criterion:

- **Criterion Eight** – The *internal consistency* (reliability) of factors was assessed through evaluation of the Squared Multiple Correlations (SMCs) – (Tabachnick and Fidell 1996). Values of SMCs can range from 0 (classed as low) to 1 (classed as high). Acceptable
values of internal consistency are 0.6 and over (Tabachnick and Fidell 1996), typical studies such as Noe and Schmitt (1986) accepted values of 0.72 to 0.89, although others have accepted lower SMCs (e.g. Duarte 1995 accepted internal consistencies of 0.63 to 0.70).

It should be noted that solutions were assessed following rotation, where factors were uncorrelated orthogonal rotation (Varimax) was used, where factors were correlated by 0.32 or more oblique (Direct Oblimin) rotation was used (as recommended by Tabachnick and Fidell 1996). Rotation is recommended as it simplifies factor structure and aids interpretation of the solution (Hair et al 1998).

3.4 Stage three: Testing the WBL-motivation model

Following completion of stage two, the WBL-motivation model was further modified and the third stage of the project aimed to test the proposed linkages between factors in the model. Thus stage three of the project aimed to fulfil objective six of the project, that is, to test the modified model of motivational perspectives in WBL from an employee standpoint in terms of:

a) The overall model fit for the data;

b) The significant factors in the model;

c) The relationships between these factors as defined by the model.

This section describes the participants involved in this stage, the methods used and the data analysis technique used to test the model.

3.4.1 Participants

Stage one had principally focused on large enterprises and stage two included a diverse range of organisational sizes. This stage of the project focuses on Small to Medium-sized Enterprises (SMEs), which are a very important group. SMEs account for a large and growing proportion of employment, nearly 4 million SMEs (less than 250 employees) in Britain (DIEE 1998b) and the growth of SMEs is deemed critical to Welsh economic success (Welsh Office 1995). However, a
number of employee development issues are relevant to this thesis. SMEs often lag behind larger organisations in many aspects of WBL and LLL due to issues such as lack of time/expertise, inability to release employees to participate in learning opportunities, lack of finance (especially cannot readily afford off-the-job training), unaware of or undervalue opportunities, and owner-managers have needs themselves and are forced into a short-term focus on survival rather a longer-term developmental focus (DfEE 1998b).

There were two stages to participant selection, firstly, gaining organisational involvement and secondly gaining participant responses. Organisations were selected via an established consultative committee between local SMEs and an Academic Institution and existing research links. A presentation was made to interested groups and volunteers were sought. Two organisations volunteered to participate in the study. Neither organisation was IIP registered, although organisation 2 was planning to initiate the IIP process in the future and both organisations were undergoing a review of their staff development procedures. Organisation 1 was a local manufacturing company employing 20 employees; Organisation 2 was a local leisure service provider employing 152 employees. Contact was made with organisational representatives to discuss the questionnaire and co-ordinate distribution, in organisation one this was an administration representative, in organisation two this was the research officer.

Questionnaires were distributed using the internal mailing system and hence included an element of self-selection in the composition of the sample (Saunders et al 1997). In total 100 responses were gained, 19 responses from organisation one (95% response rate), 81 responses from organisation two (53% response rate). However, of these 100, 96 were entered into the analysis following 2 subjects being omitted following AFA data checks (see section 3.3.4.4) and a further two being omitted following HMR data checks (see section 3.4.4.2). Table 3.3 details participant demographics.
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### Demographic Sample (N=96)

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Sample (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>61.46%</td>
</tr>
<tr>
<td>Female</td>
<td>38.54%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>18-24 years</td>
<td>12.5%</td>
</tr>
<tr>
<td>25-34 years</td>
<td>37.5%</td>
</tr>
<tr>
<td>34-44 years</td>
<td>25%</td>
</tr>
<tr>
<td>45-54 years</td>
<td>16.67%</td>
</tr>
<tr>
<td>55+</td>
<td>8.33%</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>29.17%</td>
</tr>
<tr>
<td>Married/living with partner</td>
<td>57.29%</td>
</tr>
<tr>
<td>Separated/divorced</td>
<td>11.46%</td>
</tr>
<tr>
<td>Widowed</td>
<td>2.08%</td>
</tr>
<tr>
<td><strong>Socio-economic group</strong></td>
<td></td>
</tr>
<tr>
<td>(see appendix 10 for key)</td>
<td></td>
</tr>
<tr>
<td>In group A</td>
<td>14.58%</td>
</tr>
<tr>
<td>In group B</td>
<td>43.75%</td>
</tr>
<tr>
<td>In group C1/C2</td>
<td>34.38%</td>
</tr>
<tr>
<td>In group D</td>
<td>7.29%</td>
</tr>
<tr>
<td><strong>Length of time in organisation</strong></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>6.52 years</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>6.842</td>
</tr>
<tr>
<td><strong>Length of time in formal education</strong></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>19.33 years (std. dev. 3.163)</td>
</tr>
<tr>
<td><strong>Academic Qualifications</strong></td>
<td></td>
</tr>
<tr>
<td>No formal qualifications</td>
<td>11.46%</td>
</tr>
<tr>
<td>Secondary level qualifications</td>
<td>21.88%</td>
</tr>
<tr>
<td>A-levels</td>
<td>12.5%</td>
</tr>
<tr>
<td>HND/C</td>
<td>17.71%</td>
</tr>
<tr>
<td>Undergraduate degree</td>
<td>26.04%</td>
</tr>
<tr>
<td>Masters level degree</td>
<td>9.36%</td>
</tr>
<tr>
<td>PhD</td>
<td>1.04%</td>
</tr>
<tr>
<td>Median qualification</td>
<td>HND/C</td>
</tr>
<tr>
<td><strong>Professional/Vocational Qualifications</strong></td>
<td></td>
</tr>
<tr>
<td>Formal professionally specific qualifications</td>
<td>32.29%</td>
</tr>
<tr>
<td>Formal vocational qualifications (e.g. NVQ)</td>
<td>26.04%</td>
</tr>
</tbody>
</table>

Table 3.3: Participant demographics for stage three

### 3.4.2 DATA COLLECTION METHODS

A package of measures was used to assess each of the variables in the model, and was composed of three parts:
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- A personal profile section (consisting of questions relating to demographics), see appendix 2;

- The revised Attitudes and Emotions scale of the Learning Diagnostic Questionnaire (LDQ – Honey and Mumford 1990), see appendix 3;

- The ‘WBL-motivation process’ questionnaire, the scales of which were developed in stage two (as described in section 3.3.), see appendix 6.

**Personal Profile**

The ‘Personal Profile’ section (appendix 2) assessed a number of demographics that were viewed as potentially important in the motivation-WBL model, as indicated by relevant literature and the previous research findings. In agreement with the organisations involved in this study the ‘Personal Profile’ section was placed at the back of the package, participant organisations feeling that being asked personal details straight away would disconcert their employees. In addition, the inclusion of variables within this section was restricted by organisational agreement, in particular questions relating to salary and part-time/full-time status (although desirable) could not be included in this study. One of the organisations involved in particular had encountered a high degree of sensitivity (respondents fear of being identified) to such issues when conducting previous surveys and did not wish such issues to be included in the package of measures, particularly as they felt that this might restrict the response rate.

**Learning Diagnostic Questionnaire (Honey and Mumford 1990)**

The Learning Diagnostic Questionnaire (LDQ, Honey and Mumford 1990) was originally composed of three scales:

1. Knowledge and Skills

2. Attitudes and Emotions

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The 'Attitudes and Emotions' scale of the LDQ (Honey and Mumford 1990; appendix 3) was used to identify individual scores on the attitudes towards learning from experience and the emotional robustness to be able to 'bounce' back from failure and try new things.

This LDQ scale consisted of 20-paired statements. For each item respondents are asked to choose one of the two statements that most closely applies to their own attitudes and behaviour. Each item is then scored on a dichotomous scoring system, where 0 is awarded to items that are regarded as negative aspects of the scale and 1 is awarded to positive items. Scale scores are simple summations of item scores. These total scores can then be compared against norm scores (based on British samples) as summarised in table 3.4:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Very high</th>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
<th>Very low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude and Emotions</td>
<td>18-20</td>
<td>16-17</td>
<td>12-15</td>
<td>10-11</td>
<td>0-9</td>
</tr>
</tbody>
</table>

Table 3.4: Norm scores for LDQ scales

This is a well-established and well-used tool, the accompanying manual details that the LDQ has been piloted and used by the authors on a large sample of British managers (557) and is reported to have been pragmatically useful in promoting employee development (Honey and Mumford 1990). The authors do not claim that their items are an exhaustive list of attitudes, abilities and experiences in the learning environment.

The Attitudes and Emotions scale of LDQ (Honey and Mumford 1990) was revised to suit the purposes of the project. In the interests of question economy and reducing overlap between the questionnaires, three questions were removed from this scale. The following items were removed from the ‘Attitudes and Emotions’ scale as they overlapped with the scale assessing perceived value of informal learning:

Q10 'I believe that everything that happens, nice or nasty, planned or unplanned, has learning potential' OR 'I believe the main thing is to get things done and not to think too much about learning'

Q12 'I believe that the older you get the more you become set in your ways' OR 'I believe that you are never too old to learn'
Q14 'When something ‘special’ crops up such as being asked to work on a special project, being promoted or seconded to a new job, I regard it primarily as an opportunity to improve myself’ OR ‘When something ‘special’ crops up such as being asked to work on a special project, being promoted, or seconded to a new job, I regard it primarily as an opportunity to prove myself’.

This resulted in a 17-item scale.

*The WBL-Motivation Process Questionnaire*

The WBL-Motivation Process questionnaire (appendix 6) developed specifically for this project to assess variables within the model was utilised. The development of this questionnaire has been described above – see section 3.3. It should be noted that to counter order effects several versions of the questionnaire were distributed, where each version presented the items in a different random order. For ease of reference the questionnaire in appendix 6 presents the items ordered according to each factor.

Table 3.5 summarises the variables measured by this questionnaire including measures of internal consistency where applicable.
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<table>
<thead>
<tr>
<th>Variable</th>
<th>No. of Items</th>
<th>SMC</th>
<th>Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal Profile</strong></td>
<td>10</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Learning Diagnostic Questionnaire:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes and Emotions Scale</td>
<td>17</td>
<td>NA</td>
<td>17</td>
</tr>
<tr>
<td><strong>Motivation Process Questionnaire:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Work Development Outcomes</td>
<td>6</td>
<td>0.847</td>
<td>30</td>
</tr>
<tr>
<td>b) Personal Development Outcomes</td>
<td>6</td>
<td>0.847</td>
<td>30</td>
</tr>
<tr>
<td>c) Instrumentality of formal learning</td>
<td>3</td>
<td>0.728</td>
<td>15</td>
</tr>
<tr>
<td>d) Instrumentality of informal learning</td>
<td>3</td>
<td>0.812</td>
<td>15</td>
</tr>
<tr>
<td>e) Organisational overall value and commitment to WBL</td>
<td>5</td>
<td>0.828</td>
<td>25</td>
</tr>
<tr>
<td>f) Organisational value and commitment to WBL through investment</td>
<td>6</td>
<td>0.916</td>
<td>30</td>
</tr>
<tr>
<td>g) Employee understands organisational WBL objectives</td>
<td>3</td>
<td>0.896</td>
<td>15</td>
</tr>
<tr>
<td>h) WBL Goal Setting</td>
<td>12</td>
<td>0.901</td>
<td>60</td>
</tr>
<tr>
<td>i) WBL Support</td>
<td>6</td>
<td>0.831</td>
<td>30</td>
</tr>
<tr>
<td>j) Flexibility</td>
<td>6</td>
<td>0.837</td>
<td>30</td>
</tr>
<tr>
<td>k) WBL Goal Acceptance</td>
<td>3</td>
<td>0.687</td>
<td>15</td>
</tr>
<tr>
<td>l) Satisfaction with WBL</td>
<td>9</td>
<td>0.872</td>
<td>45</td>
</tr>
</tbody>
</table>

Table 3.5: Summary of variables in final questionnaire used in stage three

3.4.3 PROCEDURE

Organisations were selected as described in section 3.4.1 above. In collaboration with an organisational representative questionnaires were distributed via each organisation’s internal mailing system and included a covering letter (appendix 7) from each organisation explaining the purposes of the project and that the project had the full support of the organisation. To guarantee participant confidentiality and anonymity responses were returned directly to the researcher, thus a stamped addressed envelope was included with all questionnaires. Participants were invited to make comments at the end of questionnaires. In collaboration with the two organisations, a deadline was set for return of the questionnaires. The response rate was assessed at this deadline and a follow-up letter was sent to all employees in both organisations requesting that any outstanding questionnaires be completed and returned, a second deadline was accordingly set.

Following collection of all completed questionnaires, responses were subject to data analysis described in the following section.
3.4.4 DATA ANALYSIS

Examining basic bivariate correlations is a useful way of exploring potential relationships between factors in this model; however, it provides an incomplete picture of how these processes interact (Pedhazur 1982). Indeed, where suppression exists zero-order correlations can be deceptively small (Cohen and Cohen 1983). Thus, the model was tested using Hierarchical Multiple Regression analysis (HMR), where the successive effects of IVs after partialling out the effects of preceding IVs in this model were tested, as recommended for exploratory model testing (Pedhazur 1982, Cohen and Cohen 1983, Tabachnick and Fidell 1996). An exploratory data analysis technique was warranted as this is the first testing of inter-factor relationships in the model and flexibility is needed to explore the interplay between variables. Furthermore, the model predicts that the variables will be related and HMR is proposed as the best method of regression that can be used for variance partitioning when IVs are correlated (Cohen and Cohen 1983). Thus HMR was used to assess the contribution to DV variance of each variable, the relationships between these variables and the interactions between variables.

HMR involves entering variables in turn and assessing their contribution to the prediction of the DV. In certain circumstances, such as in this project, several variables are entered in one step representing a functional ‘set’, a system used and recommended by previous authors (e.g. Pedhazur 1982, Jex and Elacqua 1999). Such a functional set is composed of a set of variables that might represent a stage of the model, and are themselves intercorrelated. For example, all variables relating to ‘goal setting’ might be entered as a block rather than singularly.

A number of issues should be considered when using HMR, namely, sample size, pre- and post-data analysis checks and the assessment measures to be used. These issues are discussed below.

3.4.4.1 Sample size

The evaluation of sample size may be based on a number of issues, as described by Cohen and Cohen (1983) and Tabachnick and Fidell (1996), such as the power of the test, expected effect
sizes (where \( r=0.1 \), \( r=0.3 \) and \( r=0.5 \) are small, medium and large effect sizes respectively) and level of significance for effect sizes (alpha = 0.01 or alpha = 0.05).

**Power of the test**

The power of the test indicates the probability of rejecting the null hypothesis when it is false (Everitt and Wykes 1999). It is primarily concerned with the avoidance of making a type II error, where the null hypothesis is not rejected despite being false (Rosenthal and Rosnow 1991). The null hypotheses assessed using HMR are:

1. For each variable block, \( R^2 \) is not significantly different from 0;
2. For each variable block, the change in \( R^2 \) is not significantly different from 0;
3. For each variable, \( B \) is not significantly different from 0.

The sample size was evaluated using the levels recommended by Cohen and Cohen (1983) as follows:

- Power of test = 0.8
- Use of the conventional level of effect size \( (r=0.3) \)
- Alpha = 0.05

The current sample size \( (n=96) \) exceeds the recommended sample size of 84 for these levels (using table in appendix 11). The power of the analysis (0.8) is sufficiently high to proceed with the analysis.

Furthermore, Hair et al (1998) suggest that using a power of 0.8:

- Where alpha = 0.05, with 20 IVs and sample size of 100 then \( R^2 \) of 21\% \((0.21)\) and above will be detected as significant.
- Similarly, at alpha = 0.01, with 20 IVs and sample size of 100 then \( R^2 \) of 26\% \((0.26)\) and above will be detected as significant.
However, it is acknowledged that the power of the test is reduced for smaller effect sizes. For example, for effect sizes of $r=0.2$, $\alpha=0.05$, the power of the test is reduced to 0.5 for a sample of 95, thus caution needs to be used in evaluating smaller effect sizes. However, Cohen and Cohen (1983) recognise that sample size is often highly dependent on pragmatic issues, such as the available resources, and in this case particularly sample availability.

**Generalisability**

It is further acknowledged that with smaller sample sizes there is a risk of 'overfitting' the data, that is making the results too specific to the sample and reducing generalisability (Hair et al 1998). Hair et al (1998) recommends a minimum IV to participant ratio of 1:5, which in this case equates to a sample size of 95 (19x5). Thus the current sample size satisfies this condition, however, the potential for overfitting is present and thus adjusted $R^2$ values will be used where appropriate as this accounts for overfitting (Hair et al 1998). It is also acknowledged that the sample size demands that the results of model testing require further validation with different samples in the future.

3.4.4.2 Pre- and post-analysis data checks

A number of pre- and post-analysis data checks were undertaken as recommended (Berry and Feldman 1985, Tabachnick and Fidell 1996, Hair et al 1998), and full details are presented in appendix 12. The data set was checked for data entry errors, missing data, outliers, multicollinearity, normality, linearity, homoscedasticity, outliers in the solution and independence of prediction errors.

In summary, two cases were deleted due to substantial missing data from the personal profile section of the questionnaire, reducing the sample size to 96. No multivariate outliers were found prior to or after data analysis. There were no obvious problems with violations of assumptions of linearity, homoscedasticity or independence of prediction errors.

To combat the effects of collinearity age leaving formal education was eliminated from the analysis due to a high correlation with academic qualifications ($r=0.7891$), as recommended (Tabachnick and Fidell 1996, Hair et al 1998). Academic qualifications was retained as it was
deemed the more important IV of the two for the current model, indicating level of education attained both in formal full-time education and in part-time adult education. Problems with collinearity were noted between variables *Organisation understands employee needs* and *WBL support*, as a moderate amount of variance in each of these variables was explained by the same Conditioning Index (0.59165 and 0.73167 respectively), and these two variables were highly correlated (r=0.7017). A composite score of these two variables was constructed through AFA, the resultant score representing a *WBL support* factor.

Following these data checks the main effects and interaction effects regression models were evaluated.

3.4.4.3 Assessment Measures

The following measures were used in the model assessment as recommended (Cohen and Cohen 1983, Jaccard et al 1990, Tabachnick and Fidell 1996).

- **R** – representing the multiple correlation coefficient between the variables and the overall fit of the data.

- **$R^2$, adjusted $R^2$ and $R^2$ change**– representing the proportion of DV variance accounted for by the combination of IVs, indicating how well the group of IVs together estimate the DV. The significance of $R^2$ is assessed using the F-test. Adjusted $R^2$ compensates for 'overfitting' that may occur in small samples. In HMR the significance of each block is assessed through the increase in $R^2$ as each block is entered (where significance is tested using the F-test).

- **Partial regression coefficient (B) and standardised partial regression coefficient (β)** – B representing the empirical estimate of the causal effect of the IVs on the DV when all the IVs are entered, that is, the average or expected change in DV for each unit increase in the IV when the value of other IVs are held constant. The significance of B is assessed using the t-test. $\beta$ represents B when all variables have been standardised, enabling comparison between test scores. **The standard error of B or $\beta$** represents the measure of confidence in the
accuracy of these measures. If the standard error is large in relation to the scale of measurement of the IV then this indicates lack of stability in the coefficient.

- **Semi-partial correlation (spr) or part correlation** – representing how much any single variable or set of variables (block) adds to the estimation of the DV, that is, it is the correlation between the IV (the portion that is uncorrelated with the remaining IVs) and DV. Called the semi-partial correlation as the effects of other IVs have been removed from IV but not from DV.

- **Semi-partial correlation squared (spr²) or part correlation coefficient squared** – representing the unique area that a single IV or block accounts for in a change in DV, that is, the proportion of DV variance accounted for by the IV beyond that accounted for by other IVs.

- **Partial correlation (pr)** – representing the correlation between any single variable or block and the DV when other variables are held constant, that is, the correlation between IV₁, from which all other IVs have been partialled, and the DV, from which all other IVs have also been partialled.

- **Partial correlation squared (pr²)** – representing the proportion of variance in the DV not associated with IV₂ that is associated with IV₁ (where significance is tested using the F-test), that is the proportion of variance in the DV that is independent of the remaining IVs accounted for uniquely by IV₁.
Figure 3.3 demonstrates the difference between $r^2$, $spr^2$ and $pr^2$. It should be noted that $pr^2$ would usually be larger than (and can never be smaller than) $spr^2$, as $spr^2$ is the unique contribution to DV expressed as a proportion of the total DV variance, whereas $pr^2$ is the same unique variance but expressed as a proportion of that part of DV not accounted for by the other IVs. It has been posited that $spr^2$ and $pr^2$ would rarely be above 0.25 (Cohen and Cohen 1983).

In addition to these measures it was also necessary to examine the data for suppressor, test and moderator variables. The relationship between test, suppressor and moderator variables can be seen in table 3.6.

Suppression is present when relationships between IVs are hiding their real relationship with the DV. A suppressor variable acts by suppressing irrelevant variance in IV, due to its relationship
with IV₂ and thus enhancing our understanding of the relationship between IV₁ and the DV (Cohen and Cohen 1983). The presence of such a variable is indicated when IV₁ has a large partial correlation in comparison to the zero-order correlation coefficient with the DV, that is, the partial correlation is likely to be larger than the zero-order correlation coefficient and/or \( r \) and \( \beta \) may be of opposite sign (it is important that \( B/\beta \) are significant) (Pedhazur 1982, Cohen and Cohen 1983, Davis 1985, Tabachnick and Fidell 1996). Thus zero-order correlations may be misleadingly small. Suppressor variables, therefore, aid understanding of the relationship between IV₁ and the DV by indicating sources of variance due to variables other than IV₁, variance shared with the predictor and not with the DV (Pedhazur 1982). Such variables are detected by re-running analyses omitting the suspected suppressor variable and exploring the effects on other variables left in the analysis (Tabachnick and Fidell 1996). Two types of suppressor variable have been identified: a pure suppressor variable is uncorrelated with the DV while still increasing the multiple \( R \); an impure suppressor variable is correlated to the DV, thus improving the multiple correlation through direct and indirect effects (Woolley 1997).

Test or intervening variables help to explain indirect relationships between IV₁ and the DV (Bryman and Cramer 1997), where a test variable explains differences between IV₁ subgroups in relation to the DV. A test variable is indicated when the relationship between IV₁ and the DV is reduced on addition of another IV into the solution, thus reducing the partial correlation (or \( \beta \)) between IV₁ and the DV (Cohen and Cohen 1983, Davis 1985). In such cases, it is useful to examine the differences between IV₁ subgroups in relation to the proposed test variable through the use of one-way Analysis of Variance (ANOVA) techniques (Bryman and Cramer 1997).

An interaction or moderator effect modifies the strength and/or the form of the relationship between IV₁ and the DV (Sharma et al 1981). Simple factorial Analysis of Variance (ANOVA) decomposition techniques can be used to explore the form of interactions predicted by the model, by trichotomising the IVs involved in the interaction, where:
• Low groups are defined as more than or equal to one standard deviation below the mean;

• Medium groups are defined as within one standard deviation of the mean;

• High groups are defined as more than or equal to one standard deviation above the mean (Jaccard et al 1990).

It should be noted that this is an exploratory technique and the significance of the interactions in terms of the regression analysis (in the presence of other interactions) should be investigated where interaction effects are entered after the main effects (Cohen and Cohen 1983, Jaccard et al 1990, Hair et al 1998). Therefore, these interactions offer insight into the nature of the relationship between model variables but may be insignificant in the overall model. The interaction terms identified as significant (or potentially significant) using simple factorial ANOVAs were included in an interaction effects model. To avoid problems of multi-collinearity between IVs and interaction terms (products of IVs) the variables concerned were standardised prior to calculating the interaction terms (with the exception of dummy variables – Jaccard et al 1990). Any variable included in the interaction term is entered prior to the interaction term and when re-evaluating effects it is recommended that theoretically important variables are retained even if they are not significant (Jaccard et al 1990, Hair et al 1998).

Spurious effects also need to be detected where IV₁ is not a cause of the DV but merely associated with the DV through its relationship with IV₂. In such cases the β, semi-partial correlation and partial correlation are likely to be close to 0 (Cohen and Cohen 1983). Although, these should not be confused with indirect effects and the model should be used to guide our understanding of the coefficients produced by the analysis (Cohen and Cohen 1983).

A number of options are, therefore, available to explain the interrelationships between variables in the model (Davis 1985), and need to be explored to fully understand the links between variables in the model.
3.5 SUMMARY

This study is constructed of three stages designed to develop a micro-model for understanding employee motivational perspectives in WBL and this chapter has described the methods used in each stage.

The aim was develop a model of the WBL-motivation process that was relevant to full-time employees within the South Wales area. Hence it was important to ensure that the factor structure of the model was generalisable across diverse groups. To this end three diverse samples were utilised within the study. Whilst initial factor structure was based on an exploration of the literature, factors were more specifically defined within the WBL context based on an analysis of focus groups and interviews within three large financial institutions. In order to ensure that the resultant factor structure was not an artefact of the finance sector, factor structure was tested in two more samples, one composed of employees from diverse organisations within the South Wales region, and one composed of employees in two SMEs. Exposing, testing and demonstrating the same factor structure within three samples increases confidence in the generalisability of the eventual factor structure used within the model.

This research also utilised a combination of 'qualitative' and 'quantitative' approaches in order to develop the WBL-motivation model, in recognition of the need for methodological plurism in order to overcome problems associated with fallibility of measures (Johnson and Cassell 2001, Trochim 2001b). Utilising a variety of methods in the development of the model helps to offset the specific problems associated with 'quantitative' and 'qualitative' techniques. Thus in stage one of the study, 'qualitative' methods were utilised to develop factor structure, which was an invaluable step allowing an in-depth exploration of model elements (Oppenheim 1992, Churchill 1995). 'Quantitative' methods were then utilised to further test and develop these factors. More specifically, FA not only confirmed the findings of stage one but also aided development of factor definitions (Gorsuch 198, Hair et al 1998). In addition, the use of questionnaires allowed the relevance of the factors to be tested in a larger sample, ensuring that factor structure was not an artefact of the finance sector. The use of Multiple Regression enabled an exploration of the inter-factor interactions indicated in stage one of the study to be tested. Thus 'qualitative' and
'quantitative' techniques were used in a complementary fashion, utilising different methodologies to confirm findings, which increases confidence in results.

Accordingly, the results are reported in the three following chapters:

Chapter four presents the results from stage one, which represents the initial exploration of the motivation process in WBL, incorporating views from both employer and employee and developing a conceptual model.

Chapter five presents the results from stage two, which concentrates on employee motivational perspectives in WBL and of the organisational approach to WBL. Factors contained within the proposed model are further explored and developed using factor analytic techniques to identify distinct underlying factors and their definition as measured against the theoretical background.

Chapter six presents the results from stage three, where the model is tested using Hierarchical Multiple Regression to identify significant factors and aid understanding of the nature of inter-factor relationships.
Initial Development of a WBL-Motivation Model

As discussed in previous chapters, the central aim of this project is the development of a model of the WBL-motivation process and the previous chapter described the methodology used by this project to construct such a model. The first steps towards model development were undertaken in chapter two, where a framework (based on the work of Locke and Henne 1986 and Locke 1991) was explored and presented that would be used to guide further model development. This framework clearly presents motivation as a complex, multi-dimensional process (figure 4.1).

![Figure 4.1: A framework for understanding the motivation-WBL process](image)

This framework is used within this chapter to further aid model development by:

- Suggesting which issues might be salient in the WBL-motivation process and hence warrant further investigation in this stage of the project;
Chapter 4 – Initial Development of a WBL-Motivation Model

- Serving as an organisational device indicating the ordering of salient factors in the model;
- Highlighting the potential nature of the relationship between factors within the model, in particular identification of mediating variables.

This chapter represents the next step in model development by utilising primary research to investigate the generic factors identified in the framework and initiate construction of a WBL-specific motivation model. Model development begins with the basic premise that factors highlighted within the motivational framework (figure 4.1) will be important in the WBL-motivation process. The subsequent development of this model will then be driven by participant perspectives of these issues; thus, stage one serves to move from a generic framework to a more specific model where factors emerging from this stage will be further tested in stage two. In addition, employer and employee understanding of WBL (particularly definition and recognition) will be explored as a means of establishing potential areas of congruence and dissonance that may impact on the WBL-motivation process.

This stage of the research addresses objectives one, two, three and four of the current project set out in chapter one, that is:

1. To establish both employee and employer understanding of WBL;

2. To explore the nature of and interaction between motivational factors in the WBL process from an employee and employer perspective.

3. To examine areas of congruence and dissonance between employer and employee motivational perspectives;

4. To develop a model that aids understanding of motivation in the WBL process incorporating employer-employee perspectives.

4.1 Method Summary

In the first phase, a number of focus groups with employees were conducted, along with interviews with employer representatives (senior training managers) to gauge employee-employer
perspectives of WBL in the three different organisations. The three organisations involved in this study are referred to throughout this chapter as A, B and C:

- Organisation A - an organisation not part of the Investors in People (iIP) initiative (referred to as employer A and employees A);
- Organisation B - an organisation in the process of applying for iIP status (referred to as employer B and employees B);
- Organisation C - an organisation successfully awarded iIP status (referred to as employer C and employees C).

The results are an amalgamation of the responses given in these focus groups and interviews, and important variances between employee/employer perspectives in different organisations are highlighted and discussed. This chapter presents results in five sections to further explore the issues identified in the motivational framework in relation to WBL (figure 4.1), namely:

- Section 4.2 Understanding of WBL.
- Section 4.3 Valued WBL Outcomes.
- Section 4.4 Instrumentality of WBL.
- Section 4.5 WBL Goal Setting Processes.
- Section 4.6 Factors Affecting Participation.
- Section 4.7 Outcomes of the WBL-Motivation Process.

### 4.2 Understanding of WBL

The term 'work-based learning' was not really utilised within the participating organisations. Employees and employees alike tended to use the word 'training' to refer to both formal and informal WBL, rather than using more flexible terms such as 'learning opportunity' or 'developmental activity'. This was demonstrated by the definitions of WBL given by employees and employers from all three organisations, for example, WBL was defined as:
"It's on the job training isn't it!"

Employees A

"things like management training and technical training"

Employees A

"functional training ... (and) one to one training"

Employers A

"My first impression of WBL was training"

Employees B

"(you have) the opportunity in the course of your work that you are carrying out to learn more about that job and (are) given the support and training that you need"

Employees B

"on the job training and then course type training (and) we have external exam type training ... diversity of all sorts"

Employer B

"(WBL is) ... on the job training"

Employees C

"we do lots of informal training as in one-to-one training up to the next level on the job, the managers above us do the training"

Employees C

"learning on the job, actually skills training 'next to Nelly', (computer-based) soft skills training, coaching, ... workshops, ... formal learning (using) workbooks"

(Employer C)

It is clear that employees and employers are aware of the diverse nature of WBL and recognised both the formal and informal elements within their working environment. However, the use of the
word ‘training’ indicates that WBL vocabulary has not yet permeated through the organisations. Furthermore, the term ‘training’ suggests a sense of formality about learning regardless of the form (informal or formal) that learning takes. Perhaps this is understandable if the term WBL is deconstructed, ‘work-based’ suggests formality in the sense that it relates to the development of duties associated with employment, as illustrated by the following quotes:

"WBL is something that has something to do with your work, it’s designed to enable you to contribute in a greater way to the work that goes on in the organisation"

Employees A

"learning that has something to do with your work ... with direct relevance to the (organisation)"

Employer B

The use of the word ‘training’ to describe WBL may also indicate that the perceived responsibility for learning may lie with employers rather than employees. In their everyday lives employees encounter a diverse range of learning opportunities, which may be neglected if employees expect to be directed towards learning opportunities by their employer. It also suggests a fragmentary rather than a continual approach to learning, where learning is seen as ‘training’ for a specific purpose rather an ongoing process. This issue may prove to be important in encouraging individuals to make the most of all WBL opportunities, particularly the more implicit informal aspects, and to take more initiative in their own development.

Further discussion focused on employee/employer conceptions of formal and informal WBL. In the organisational contexts a variety of WBL appear to be utilised. Examples of formal and informal types of WBL cited by employees and employers are summarised in table 4.1 below.
Table 4.1: Participant generated examples of WBL

<table>
<thead>
<tr>
<th>Formal</th>
<th>Informal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical training (esp. IT)</td>
<td>Software applications through daily exposure to usage</td>
</tr>
<tr>
<td>Management training</td>
<td>One-to one desk training on functions</td>
</tr>
<tr>
<td>Language training</td>
<td>Telephone requests and irate customers</td>
</tr>
<tr>
<td>NVQ, e.g. level 3 in customer care</td>
<td>Line manager explaining errors and how to address problems</td>
</tr>
<tr>
<td>Certificates relating to various financial associations</td>
<td>Work-shadowing</td>
</tr>
<tr>
<td>Certificates relating to associations auxiliary to financial services</td>
<td>Open and Distance Learning packages (ODL)</td>
</tr>
<tr>
<td>Counselling skills</td>
<td>Team meetings</td>
</tr>
<tr>
<td>General skills training, e.g. speed reading</td>
<td>Videos and books</td>
</tr>
</tbody>
</table>

In general terms, participants viewed formal learning as being structured, where a specific outcome (for example a qualification) was attained from attendance on an external or in-house course that was often time-constrained. Further, such learning often took place out of context, for example, attending a course on external premises. More informal learning was viewed as being less structured and taking diverse (often unconventional) forms, frequently not having specific outcomes and often not being time-constrained. This type of learning nearly always took place in the context of work.

In terms of examples of formal WBL, inter-organisational differences were slight and mainly due to slight variances in services provided by the organisations and hence differences in demands, although ‘training courses’ applicable to all three organisations were also evident.

However, there were inter-organisational differences when employers and employees were asked to identify examples of informal WBL that they participated in. Participants from all three organisations recognised the basic learning potential of everyday experiences and ‘one-to-one’ support. However, when asked to give specific examples:

- Participants from organisation C gave the most sophisticated and wider scope of examples, for example, using appropriate literature as a source of information, coaching, mentoring schemes and access to Open and Distance Learning packages (ODL).
• Participants from organisation B gave the next most sophisticated examples, including very specific examples of where reflecting on everyday experiences had been a useful learning exercise, such as dealing with telephone and postal requests, and irate customers. Furthermore, they found discussing errors with their line managers a useful learning experience as line managers would suggest how a given situation could be approached in different and more productive ways.

• Participants from organisation A gave the least sophisticated and smallest range of examples, listing only ‘one-to-one’ training and general ‘learning from experience’ as examples of informal WBL.

In addition, within organisations B and C formal and informal WBL were not strictly divided into two categories but were viewed as falling along a continuum. Hence WBL ranged from the most formal pole, e.g. external exam-based courses, through semi-formal WBL, e.g. internally delivered workshops and coaching, to the most informal pole, e.g. observation, reading a book or relevant literature, or simply asking somebody a question (figure 4.2).

<table>
<thead>
<tr>
<th>Formal WBL</th>
<th>Semi-structured WBL</th>
<th>Informal WBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>• NVQs</td>
<td>• Internal Workshops</td>
<td>• Observation</td>
</tr>
<tr>
<td>• Professional Qualifications</td>
<td>• Coaching</td>
<td>• Feedback from Line Manager</td>
</tr>
</tbody>
</table>

Figure 4.2: The continuum of WBL

It is also important to note that the scope of employee examples of WBL mirrored those given by their respective employers. Thus a similar perspective of WBL seemed to be prevalent throughout an organisation, which may reflect differences in organisational approaches to WBL. Employer A tended to heavily utilise formal courses to address learning goals, rather than encouraging employees to utilise more informal modes of WBL. Employers B and C viewed the diversity of WBL as a positive asset and utilised the whole range of WBL to a greater extent than organisation A. The differential recognition of WBL opportunities by employees and employers may have serious implications for exploitation of WBL, especially informal WBL where opportunities may be overlooked diminishing their developmental value. Indeed, this was reflected in employees and employers self-reported participation in informal WBL, employer and employees from organisation
A reported participating to a much lesser degree in informal opportunities than employers and employees from organisations B and C. Whether, these individual estimates of participation rates are based on fact or simply their non-recognition of WBL opportunities, their levels of perceived participation are revealing. However, the ratio of formal to informal WBL utilised by employers and employees may be dependent on the type of job and related tasks, more specialised roles requiring more formal courses in line with technological or theoretical demands of that post. Although the causal relationship cannot be identified from this stage of the research, this suggests that the approach of employer A may be having a negative or at least restrictive influence on employee recognition of WBL, in contrast to the potentially positive effect on employee recognition that the approach of employers B and C may be exerting. This issue is discussed in more depth in section 4.4.

4.3 VALUED WBL OUTCOMES

Employers and employees alike recognised the importance, relevance and potential range of outcomes that could be addressed by WBL. Furthermore there was a high degree of similarity between the categories of outcomes identified by the employers and employees, which are displayed in table 4.2.

<table>
<thead>
<tr>
<th>Employer Need Categories</th>
<th>Employee Need Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organisational Adaptation</strong></td>
<td><strong>Work Development</strong></td>
</tr>
<tr>
<td>Bridging the skills gap; keeping up with new technological, product and service developments; multi-skilled work force.</td>
<td>Lack of knowledge about an area; development of task specific skills; enhancing work performance.</td>
</tr>
<tr>
<td><strong>Employee Personal Development</strong></td>
<td><strong>Personal Development</strong></td>
</tr>
<tr>
<td>Networking; morale boosting; confidence building.</td>
<td>Confidence building; networking; enhancing career profile.</td>
</tr>
</tbody>
</table>

Table 4.2: Need categories identified by employers and employees

It is noted that, although identifying similar categories, employers and employees necessarily have different perspectives: The employer tending towards a macro/organisational perspective and the employees tending towards a micro/individual/personal perspective.
Organisational Adaptation and Work Developmental Outcomes

From employees' perspectives, fulfilment of work developmental outcomes was viewed as the primary aim of WBL in any form. Workplace survival was the key element in this category that was equally important whether you were stationary or mobile within the organisational structure. Individuals recognised the need to keep up with the changing organisational demands that impacted on their job design, which translated into the need to modify and modernise existing skills. Constant innovations in technology and other processes place demands on the workforce to adapt to changes. An employee not keeping pace runs the risk of becoming "a dinosaur" and, in effect, obsolete in the workplace. Basically, the first aim of WBL for employees in all three organisations was specifically focused on ensuring that individuals had the necessary tools to be able to fulfil the demands of their job.

Similarly, the primary organisational aim was the promotion of a productive organisation with the potential to grow and diversify. In order to accomplish this there were subordinate aims to bridge existing skills gaps in the organisation and keep up to date with technology, products and services, which are essential for the successful operation of the organisation. The emphasis on organisational survival echoes findings from the previous section, where WBL was expressed in formal terms of 'training', and emphasises the perceived focus on 'work' rather than 'self' in terms of WBL and associated development. This is contrary to the philosophy of LLL and perhaps is indicative of the sort of pressure present in today's workforce.

Employee Personal Development and Personal Developmental Outcomes

Both employers and employees viewed personal developmental outcomes as secondary (albeit necessary) aims of WBL. It was assumed that participation in WBL would boost employee confidence in their ability to do their job, make important decisions and deal competently with customers and ultimately boost morale. This confidence would come from not only gaining the relevant skills but also a greater knowledge of the organisations' systems and understanding the rationale behind organisational processes. Knowing how to do a particular job and being able to show somebody else how to do it boosted employee confidence. WBL also increased an individual's overall profile and hence their promotability and earning capacity. Even if promotion was not an aim, WBL was seen as a way of making work more interesting. Networking as a result
of participating in WBL was seen as an integral part of personal development, giving access to
information and the experiences of others. The social aspects of learning were thus seen as
integral to personal development outcomes, rather than being a separate category. WBL also
increased the developmental opportunities for all members of staff; this was particularly important
where there had been previous imbalances, especially in relation to gender. Employees felt that
WBL was relevant to everybody, if they took the opportunity to utilise opportunities to the full.
However, employees did not feel that there was place in the work setting for individuals to learn for
its own sake, learning had to be beneficial to work development. Learning for its own sake should
be pursued outside of the workplace.

In addition, employers were aware that personal development might serve outcomes that were not
beneficial to the organisation, namely external promotion, but accepted this as an inevitable part
of developing the workforce. However, some organisations did put some safeguards in place to
ensure that employees did not leave their employment immediately after development episodes.

Importantly, these 'value chain' categories, work development and personal development
outcomes, identified by participants closely resemble those highlighted by other studies of learning
in the workplace, reflecting those categories highlighted by other employees (Seagraves et al
1996, Nordhaug 1989) and employer groups (Seagraves et al 1996). The emphasis on work
development outcomes is also reflected in the literature (Newstead et al 1997).

Furthermore, this study suggests that a number of valued outcomes, both work development and
personal development outcomes, can be addressed by the same behaviour, that is, WBL. This is
consistent with the theoretical suggestions that several 'values' may be addressed by the same
behaviour at one time (Maslow 1987, Schein 1988, Reid and Barrington 1997). Employers and
employees recognised the need for confident, multi-skilled individuals, and WBL was seen by all
as a useful tool to promote this. Ultimately, valued outcomes (both work and personal) were seen
as complementary elements that worked together to benefit the organisation and the individual if
fully exploited. The link between these valued outcomes can be seen in the following
'instrumentality chain' (figure 4.3).
Chapter 4 – Initial Development of a WBL-Motivation Model

It is encouraging that employers and employees seem to understand how their own 'valued outcomes' were interwoven in this instrumentality chain. A positive organisational image could result from the development of a work force that can, not only competently perform their various roles, but also present an assured and happy image instilling confidence in their customers. Addressing these sub-outcomes and ensuring that the organisation can deliver its services will equate to fulfilment of employee and employer overall need for survival, productivity and growth. As discussed in chapter two, others (Brennan and Little 1996, Seagraves et al 1996) have found evidence to support such instrumentality chains where the employee benefits of WBL are linked to the organisational benefits of WBL.

4.3.1 MEASURING 'NEEDS' OR 'VALUES'?

It was highlighted in chapter two that often individuals do not report 'pure' needs as reasons for participating in learning, rather individuals tend to speak in terms of outcomes that they subjectively value, making the measurement of 'pure' needs difficult. For example, rather than stating 'physiological' reasons for participating in learning, an individual may state 'gaining a qualification' as a reason for learning. These two reasons may be linked together in an instrumentality chain, where gaining a qualification increases earning potential, which increases
spending power and thus can address physiological needs for food. Similarly, Maslow (1987) suggested that 'needs' in the average person may not be directly measurable but are more often conceptually derived from a range of conscious 'desires' or 'values'. Pinder (1984) elaborated on this concept by proposing the existence of instrumentality chains linking fundamental 'needs' with 'values'. Thus individuals would not perceive a distinction between 'values' and 'needs' rather they would perceive a number of 'outcomes' that they wished to achieve that were linked together.

The evidence from the current project is that employees did identify instrumentality chains constructed of both 'values' and 'needs', where a 'value', such as development of skills, was linked to a fundamental 'need', such as survival. Thus individuals typically reported WBL outcomes in terms of 'valued outcomes', composed of 'values' and fundamental 'needs', which were intimately linked in instrumentality chains. The next chapter will examine whether such issues can be defined as one factor, representing the instrumentality chain, or a series of factors, representing values and needs.

4.3.2 UNINTERESTED PARTIES?

Although all participants recognised and accepted the outcomes fulfilled by WBL, they identified a number of groups who may not subscribe to these outcomes and did not view WBL as an important and essential element at work. These groups were:

- Firstly, those employees who had worked for the same organisation for a prolonged period of time may feel that they know all they need to know and were 'fully trained'. They may accept the need for 'refresher' training but nothing more extensive.

- Secondly, those employees who were in older age groups, although cognisant of the developmental outcomes fulfilled by WBL, felt that as they were near the end of their working lives that there was no place for development. Here equating development with promotion.

- Thirdly, some employees were simply happy in their job and did not feel the need for further development. Alternatively, a perceived lack of upward promotion may lead to WBL being viewed as a 'waste of time'. Employees did not see the possibilities of
becoming multi-skilled and moving sideways in an organisation’s structure as a means of enhancing their career or job variety, again equating development with promotion.

- Lastly, some employees were resistant to change and did not want to lose the old systems of the organisation that they felt comfortable with.

The common element among all of these groups is the lack of recognition of the inevitability of change and the ‘lifelong’ element of learning, that is everybody, no matter what their life stage can benefit from WBL. The constant stream of technological and systems developments, both internal and external to the organisation, would exert pressure on current processes and demand changes. Even if an individual was static within an organisation’s hierarchy, the position that they occupied and the corresponding job design would change and the inevitable growing skills gap would have to be addressed. Employees felt that this was most significant with regard to developments within the field of information technology. However, participants felt that WBL offered developmental opportunities to all employees, particularly those who may have been neglected in the past, for example, female members of staff, and were anxious that the groups identified above should be encouraged to exploit WBL to the full.

Such differences between demographic groups are consistent with findings in the literature. For example, Ruiz-Quintanilla and Wilpert (1990) identified potential differences between age and gender groups, where younger adults and men tended to focus on work-related outcomes and older adults and females tended to focus on personal development outcomes. The same study indicated potential differences between individuals based on length of service. For example, social contact was found to be strongly valued only at career onset and gradually declined over the career lifespan.

4.3.3 Reactive versus Proactive WBL

The evidence from this research indicates that WBL was both reactive and proactive.

WBL was reactive in response to technological advancements and innovations. Employees described many situations where there was a trigger that prompted the individual to utilise learning in order to deal with a particular circumstance. For example, a switch or amalgamation of departments may prompt an individual to adapt to this change by learning more about their new
position and responsibilities. Individuals who felt that they had handled a situation badly would try to learn new ways of approaching similar situations in the future. Indeed, it is essential that such developmental tasks encountered at work are successfully resolved if the individual is to remain competent and the organisation is to maintain a stable base from which to develop. This is consistent with the adult education literature, which has found many instances of reactionary learning in adult learner groups, particularly transitional periods where learning is seen as an essential coping mechanism (Boshier 1971, Rubenson 1978, Cross 1981, Darkenwald and Merriam 1982, Cookson 1986).

However, there was also evidence of a move towards proactive WBL in preparing for future promotion or alternative employment. Additionally, Personal Development Plans might map out a series of learning goals for the next 12 months in response to predicted organisational and/or individual needs. It was posited in chapter two that such an approach lies half way between purely reactive, fragmented learning and growth-orientated, continuous learning. Such an approach stresses matching of needs and WBL, planning for future needs that supports the strategic direction of the organisation and hence is proactive, but still emphasises organisational control and direction focusing on time-constrained, defined goals rather than continuous self-growth and hence is likely not be wholly continuous learning.

Boshier (1977) suggested that individual participation in adult education was based on their position on a psychological continuum ranging from 'life chance' to 'life space'. 'Life-chancers' seek to remedy a deficiency or imbalance in their life, such as the need to acquire knowledge, skills or attitudes in order to cope with important social, psychological or vocational aspects of their life. Life-spacers participate in learning as a means of self-expression and promoting self-growth, similar to 'self-actualisers'. The outcomes expressed in this study by individuals who participated in WBL seem to indicate that individuals were closer to the 'life chance' pole of the continuum than the 'life space'. This may be particularly the case for work-development outcomes that often focus on an inadequacy or deficiency in an area of work.

4.3.4 EMPLOYEE PERCEPTIONS OF ORGANISATIONAL RECOGNITION OF NEEDS

The preceding section identified a high level of congruity between employers and employees across all three organisations with regard to valued WBL outcomes. However, examination of
employee perceptions of the level of organisational understanding of employee needs highlighted clear differences between the three organisations. At one extreme the WBL needs identified by organisation A (a non-IIP organisation) were viewed by employees A as dissonant with their own perceptions of needs. This is in contrast to Organisation C (an IIP organisation), where needs identified by the organisation were perceived by employees C as congruent with their own perception of needs. These perceived differences can be represented on a continuum based on flexibility and approach to need-identification.

**Increasing flexibility and perceived employer-employee congruence**

| Needs recognised according to job design | Needs recognised according to job design with individual adaptations | Needs recognised according to both personal and work |
| Organisation A – Non IIP | Organisation B – IIP Process | Organisation C – IIP Status |

Employees A suggested that the WBL outcomes recognised by their organisation were identified according to a job design, as stated in the official organisational documentation, rather than with reference to the individual doing that particular job. Thus the organisation seemed to recognise the overall work development outcomes related to a ‘job’ but not the individual employee differences in knowledge and skills and personal development outcomes. The organisation was viewed as simply implementing company-wide training policies that ignored individual ‘valued outcomes’ and hence were too general and sometimes inappropriately applied. In consequence, employees felt that resources were wasted on addressing particular skills and knowledge that an employee might already possess, and personal development outcomes were neglected. Employees viewed this ‘top-down’ approach negatively; they felt that rather than being viewed as individuals who were an integral part of a system they were viewed as ‘numbers’ who were squeezed into an inflexible system. Although individuals understood the difficulties faced by the organisation they felt that developmental outcomes should be focused on specific departments and that an effective communication system should exist between individual departments and the training section to promote the process of need identification and the appropriate implementation of WBL.
Chapter 4 – Initial Development of a WBL-Motivation Model

The two groups of employees from organisation B presented slightly different views regarding how they perceived the organisation's recognition of WBL outcomes. These groups were interviewed some months apart and in-between these sessions the organisation had started to modify their employee development program as a result of their involvement in the IIP scheme. The initial group of employees will be referred to as B1, representing the organisation at the start of the IIP process, and the second group of employees will be referred to as B2, representing the organisation in the middle of the IIP process. This delay between the two interviews proved to be important, employees B1 were less confident in organisational need-identification than employees B2.

- Employees B1, although they had an input into need-identification, dissonance was still perceived between employee-employer perceptions of employee needs. This group identified interdepartmental and inter-managerial differences in need-identification, especially in relation to personal development outcomes as a major element in the perception of dissonance. The recognition of needs throughout the organisation was viewed as haphazard; the extent to which both work and personal outcomes were recognised largely depended on your department and line manager.

- Employees B2 perceived more congruence between employee-employer perceptions of employee needs. They perceived a more uniform and concrete recognition of work and personal needs across the organisation. Furthermore, they felt able to approach the training department at any time to discuss their needs independently of the official appraisal system.

The restructuring of organisation B's employee development system as a result of IIP seemed to have a positive impact on employee perceptions of organisational need-identification.

However, it is important to note that both groups of employees from organisation B felt that the organisation had a differential approach to longer serving employees than newer employees. Longer-term employees often felt that they were neglected as they were excluded from certain schemes. They believed the organisation did not recognise that longer serving employees also needed to take advantage of WBL to enhance both their work and personal development. Two main reasons were advanced for this: firstly, the organisation may perceive that the longer term
employees are already able to do their job and hence the work development outcomes did not apply; secondly, longer-serving employees nearing retirement age may not be worth the time and financial investments demanded by WBL due to the shorter length of service that might be expected of them.

Hence organisation B can be placed in the middle of the continuum (figure 4.4) as they represent the transition stage of need-identification for organisations in the LiP process. They demonstrate the flexibility to integrate individual and organisational needs for development, but are not yet perceived as fully recognising the needs of all employees.

Employees C felt that organisation C recognised both their personal and work development needs and incorporated a great deal of flexibility in their approach. The major difference between organisations B and C was that Organisation C was perceived as extending its WBL policies to all employees, even to employees who were taking long-term leave through illness or child care. These employees were encouraged to attend refresher courses, even whilst on leave, to ensure that they kept up-to-date with relevant developments in their area as well as consolidating their existing knowledge and skills. This holistic approach indicates that organisation C should be placed at the opposite end of the continuum (figure 4.4) to organisation A.

Despite these differences in employee perceptions of their respective organisational need-identification, all three organisations took a similar approach to need-identification, although as might be expected there were several subtle differences. Needs were initially identified relating to the business objectives, which were translated into individual characteristics needed to fulfil a certain organisational role. Thus there were a number of organisational needs relating to a ‘job’ rather than the individual. Line managers and individuals would discuss these characteristics in the appraisal system. However, differences in approach in terms of the emphasis put on organisational or employee needs and the responsibility for need-identification probably lead to the different employee perceptions of organisational understanding of employee needs.

Employer A strongly emphasised the ‘top-down’ approach as their main need-identification process, a ‘bottom-up’ approach taking a lesser, secondary role. Whilst individual needs might be negotiated and organisational outcomes were prescribed and were non-negotiable.
Employer B was extremely keen to stress that employees had to take some responsibility for their development and ownership of the needs identified in their appraisal. They adopted what they termed a “top-down, bottom-up” approach, where need identification was driven not only from the ‘top-down’ by the directorate through examination of the business objectives but also from the ‘bottom-up’ by individual employees taking initiatives and having a strong input into the appraisal process. Employees were required to complete a need identification sheet before each appraisal to ensure that they would have some input into the process. This ‘bottom-up’ approach was seen as an essential part of the process for two reasons. Firstly, they recognised the importance of employee responsibility in the eventual success of the development programme. Secondly, the appraisal process often identified outcomes that would have not otherwise been identified by the organisation.

Employer C also emphasised the importance of employees taking responsibility for development, where an individual would be expected to bring attention to outcomes that were being neglected within the organisation.

Thus employers B and C were more flexible in their approach to need-identification than employer A, providing employees with varying degrees of negotiation. This flexibility may prove to be an important element in overall individual WBL motivation, particularly in forming their perceptions of employee-employer dissonance/congruence. Such perceptions are likely to have an impact on future stages in the WBL-motivation process, particularly goal acceptance and satisfaction with WBL. The differential views of congruence suggest that, to maximise motivation, it should be established if employees perceive that their respective organisations understand their needs, and if this factor is important in the WBL motivation model.

4.4 INSTRUMENTALITY OF WBL

Employers and employees from the three organisations valued WBL as a developmental resource that would address work, personal and organisational development outcomes discussed above. WBL was viewed as an essential element within the working environment that could be utilised to keep up-to-date with a constantly changing work place. Establishing that employees and employers value WBL as instrumental in addressing their developmental needs is an important

Employees valued all types of WBL, both formal and informal, as having a role to play in employee development. However, greater value was placed on informal WBL, which, by its very nature of placing learning in context, was valued as more relevant to specific job tasks and presented greater opportunities for practice, hence promoting learning and its transfer to similar situations in the work-place. Informal WBL was viewed as a resource that actually ‘showed you how to do your job,’ thereby facilitating the transfer of learning to the workplace.

Employees did recognise that formal learning has a part to play in employee development. Some jobs demanded that employees had a solid theoretical foundation in certain areas that could only be gained through formal study. Organisation C tried to enhance the learning potential from formal WBL by having a pre-course discussion with employees about the relevance of a particular course. By mapping the elements of a course that corresponded to job tasks, each employee was provided with a ‘learning framework’ relevant to their outcomes that promoted the transfer of learning from the classroom setting to the work place.

However, there were differences between employers A, B and C in terms of the WBL that they valued. Employer A valued formal WBL to a much greater extent than informal WBL, which was demonstrated by their prescription of a ‘course’ to address the various developmental outcomes identified during appraisal, and their apparent neglect of informal WBL. Top-level management of this organisation influenced the direction of the training department through directives specifying compulsory courses and their positive attitude towards ‘expensive’ consultant led courses. However, at mid-management level employer A did value ‘in-house’ training more than externally delivered courses as it was viewed as being more relevant to the organisation, internal trainers knew the nature of the business and were able to deliver information in the context of the organisation.

Employers B and C, however, valued all forms of WBL equally, not distinguishing between formal or informal but viewing WBL as a continuum (figure 4.2, page 151). Thus employers B and C utilised whatever form of learning was appropriate to the developmental need, the roles demanded by a particular job or even an individual’s learning style. Furthermore, the importance placed on
all forms of WBL by employers B and C was underlined by their integration of various forms of WBL to address needs. Top-level management in these two organisations were committed to IIP and hence all forms of training, which had a strong influence on the training department. Employer C suggested that recognition of more informal aspects of WBL by the organisation might be cost-driven, many formal courses being costly to run, especially those that involved the services of a consultant. Some developmental outcomes could be adequately addressed through informal WBL opportunities and the promotion of Open and Distance Learning (ODL) and coaching techniques amongst others made good business sense.

4.4.1 Employee Perceptions of Organisational Value and Commitment to WBL

Evidence from these focus groups suggests that the employers' differing approaches to WBL and the perceived organisational value and commitment to WBL impacts, either negatively (pre-IIP group) or positively (post-IIP group) on the value placed on WBL by employees. Two groups were identified:

- *Pre-IIP Group* - Employees A and employees B1 (start of the IIP process but prior to the implementation of changes in training and development driven by IIP);

- *Post-IIP Group* - Employees C and employees B2 (after the implementation of changes in training and development due to IIP).

Pre-IIP Group

The approach of employers pre-IIP seemed to have a negative impact on the instrumentality of WBL as perceived by employees in this group. There are a number of factors that may have contributed to this negative effect:

1. The perceived organisational bias for formal WBL and seemingly non-recognition of informal WBL.
The lack of effective systems to exploit learning from formal WBL;

3. Perceived lack of real commitment to developing people.

1) Perceived organisational bias for formal learning

Organisations A and B1 were perceived as placing a higher value on formal WBL in preference to the more informal aspects. Rather than recognising the effort that employees put into everyday learning opportunities, informal WBL was simply viewed as individuals 'just doing their job'. This is in contrast to attendance on formal courses, which was viewed as employees showing willingness to develop and taking responsibility for learning. The lack of a system for recognition of informal learning was frustrating to employees as it was dissonant with their own views. Employees felt that rather than harnessing the potential learning values inherent in informal WBL, there tended to be a 'hope' by the organisations that by 'sitting somebody next to another person' or 'reading a file' that they would somehow 'learn to do the job'. Furthermore, when a mentor was assigned to an employee, they were often not an appropriate person. Hence there was no system for recognition of informal learning, which was frustrating to employees.

2) Lack of effective systems to exploit formal learning

Despite the apparent organisational bias for formal WBL, employees felt that the organisations did not exploit this resource to its fullest potential. A major issue was that the organisations were too reliant on external formal courses that could have easily been offered in-house (both through courses and less formal mentoring) to a wider range of people. Furthermore, formal courses were often not relevant to employee outcomes, the organisations were viewed as encouraging participation on formal courses to enhance the company profile by showing 'numbers on courses' and not for the specific educational value to an individual. Indeed, in organisation A employees had been sent on training courses for outdated systems that were soon to be replaced or for new systems that were not going to be implemented for at least two years.

Furthermore, if a course was compulsory this often indicated to an individual that they were 'no good at their job' and were not able to identify their own areas of weakness. In essence, by making a course compulsory the organisation was sending negative messages to employees about their capabilities. These messages actually may have hindered individuals seeing the
positive value in the course that they were being sent on or may have even led to the course being viewed negatively as something that hindered their work rather than enhancing it. Indeed this had a direct impact on the goal setting stage discussed later.

However, employer A did recognise that some employees were not content with the type of training provided by them. This was especially in the case of compulsory courses, which they had to attend whether they wanted to or not. The resultant negative attitudes of employees often diminished the potential learning from the course. However, compulsory courses may have been viewed negatively as it was not relevant to an individual and also that individuals did not like to be told that they needed to learn something.

3) Commitment

In organisation A it was apparent that senior level management did not participate in WBL, despite having developmental needs. Employees perceived this lack of involvement as indicating a lack of value and commitment to WBL by the 'organisational leadership' demotivated employees, some of whom began to question the relevance of WBL to themselves. Some of the quotes from employees in organisation A are quite revealing about the effect that this sort of negative messaging from top-level management has on lower graded employees:

"When you see people (in senior management) not willing to go (on courses), you think ... why should I bother!? Because they obviously didn't get where they are through training. I think that it is a very bad attitude problem. You should follow by leadership and (this organisation) just doesn't get it!"

"The higher they are ... they think the less training they need ... and sometimes it is quite the reverse even down to basic skills like IT."

"The higher (management) ... attitude to training is that they think they know it all. ... if they were the only ones in (the building) and they needed a basic schedule ... they wouldn't know how to do it."

Organisations A and B1 were viewed as having an 'unconstructive' attitude to training and development, being more concerned with achieving targets than their commitment to developing
people. Furthermore, employees felt that there were inter-departmental differences in investment in training and development, with a bias towards 'sales' departments, hence many employees felt undervalued by their respective organisations.

Employees were further frustrated by the fact that WBL opportunities that had been identified in their training pathways were often not delivered and no explanation was given by the organisation.

**Post-liP Group**

The perceived approach to WBL of employers Post-liP seemed to have a positive impact on the value placed on WBL by employees in this group. The factors that characterised this positive image were directly opposite to those just discussed:

1. Unbiased approach to formal and informal WBL, which employees found encouraging and more congruent with their own views;

2. Effective systems for exploitation of WBL;

3. Perceived real commitment to WBL.

**1) Unbiased approach to WBL**

Organisations B2 and C were perceived as having broadened their traditional approach to training and development and hence valuing both formal and informal types of WBL as useful resources. Employees felt that wider choices of learning opportunities, across the spectrum from informal to formal, were being promoted and offered within the organisations without bias to one particular type. Indeed, employers B2 and C reflected this, reporting that the diversity of WBL was a positive asset to the organisations.

**2) Effective systems for exploitation of WBL**

Employees felt that organisations B2 and C provided more semi-structured, in-house training and less external courses. It was felt that different types of WBL were being used in a more productive and appropriate manner, where WBL was being matched to needs more successfully. Indeed, employers B2 and C described using the different types of WBL in a complementary fashion with self-reported success, for example, informal feedback sessions with an individual’s line manager.
were used to reinforce learning from formal courses, or coaching was used as an immediate
response to a training need that would be formally backed up by a course at a later date. Indeed,
employers B2 and C recognised that a large proportion of WBL may not actually involve the
training department itself. WBL near the informal pole of the continuum (figure 4.2) would
probably only involve employees in an individual department, for example, a new member of staff
may be assigned to a more experienced member to simply observe how they handle a particular
task. Thus responsibility was devolved through the organisation, where training departments were
more of a discussion and facilitating department, promoting individual and organisational LLL. Thus employer and employee perceptions of the organisational approach were in close harmony.

However employees B2 thought that the organisation had still not adopted the definitive approach
to WBL. They did not seem to recognise the more informal aspects of WBL as they should,
tending to rely on individual departments to promote informal WBL. Indeed, organisations B2 and
C admitted that formal WBL was recorded in a more structured and more comprehensive way than
informal types of WBL, which may be a reflection of the unstructured nature of informal WBL.
Formal recording of informal learning events may be cumbersome considering the potentially
infinite range of informal learning opportunities within the workplace.

Furthermore, some employees B2 felt that they did not offer enough external course opportunities.
Organisation B2, therefore, still had to promote employee confidence in WBL through its approach
to development. However, this should be assessed against comments by employer C who felt that
certain employees, including those in managerial positions, tended to measure learning and
development in terms of training courses attended rather than making the most of everyday
learning opportunities. Employer C felt that such employees did not really value more informal
types of WBL, as they did not view development as an ongoing process but as a series of courses
that could be ‘ticked off’. Furthermore, managers responsible for staff development may still try
and match a course with a developmental need rather than looking across the wider spectrum of
WBL opportunities.

3) Perceived real commitment to WBL

Organisations B2 and C were viewed as being committed to training and development in all
departments, not just ‘sales’, to promote multi-skilled and confident employees. Organisations
were apparently committed to WBL from the very top level of management, and understood the value of investing in employee development, not just for the pragmatic benefits but also for the positive impact on staff commitment and morale. Employees saw this change in approach as a direct result of the organisations’ inclusion in the liP scheme, as it focused attention on the positive and negative elements within the developmental system. Employees were encouraged by the organisations commitment to development, which seemed to positively impact on their own value of all types of WBL.

Employees viewed commitment to WBL as being demonstrated not only by the amount of financial investment but also by the ‘visibility’ of WBL, for example dedicated trainers assigned to each department or branch, or the promptness of delivery of new service training. In order to demonstrate their commitment to WBL, employer C ensured that a training representative attended board meetings and executive meetings, thus inputting into top level management decisions with regard to employee development.

However, employees B2 were a little sceptical, hoping that the organisation’s commitment to development would continue after they had been awarded liP status, as had been the case in organisation C. Indeed, employees B2 felt that the organisation’s biggest obstacle would be to overcome employees’ negative attitude to WBL, which was a result of the organisation’s traditional approach to development.

It would seem that by changing their approach to employee development - showing commitment to all types of WBL, offering a wider choice of opportunities to all employees and raising awareness of opportunities - that an organisation could have a positive impact on the value that employees place on WBL, both formal and informal. Whilst a perceived organisational bias for formal WBL, a lack of effective systems to exploit learning from formal WBL and seemingly non-recognition of informal learning, and a lack of commitment to WBL adversely affected the value placed on formal WBL by individuals and it may even have exaggerated the value placed on informal WBL in reaction to this approach. Involvement in the liP scheme, which stimulated a more flexible approach to developmental resources, seemed to have a positive effect on both the perceived organisational value of WBL and hence a positive effect on employee value of WBL. Similar organisational influences on individual perceptions of the value of training have been found in
training research (Feldman 1989, Cohen 1990, Tannenbaum et al 1991, Tannenbaum and Yukl 1992). These elements may play a crucial role in influencing the individual employee's value of WBL and raising the overall profile of WBL.

4.5 WBL GOAL SETTING PROCESSES

All three organisations utilised the appraisal system as a mechanism for the setting of learning goals and compilation of a development pathway for each employee. Needs relating to the business objectives were identified and translated into specific job-related outcomes. Organisational and additional individual learning outcomes were then discussed in the appraisal system, the rationale being that each individual would have a tailored development pathway, specifically setting out what was expected of them over the next year and to avoid problems such as employees attending unsuitable courses. A pro-active approach was adopted to the introduction of new technology, services or products, ensuring that the appropriate training was provided to all individuals concerned as a means for facilitating adaptation to foreseeable change. However, all three employers agreed it was necessary for training departments to be accessible at all times to employees to discuss extra WBL needs. At each appraisal session an appropriate WBL resource would be matched with a development need, which would then be 'ticked-off' at subsequent appraisal sessions when a goal had been achieved. In terms of communication of organisational policy, all three employers used the induction and appraisal process to inform individuals about the training and development systems, including: what is expected of them; what is on offer; where to get help; how the appraisal system works. All three employers had some sort of evaluation system in place for formal WBL, which generally involved the use of the appraisal interview and course evaluation forms. All three employers sent out post-course evaluation forms, which contained questions about the delivery of a course and how useful it was to the individual. In the appraisal interview courses that were attended were 'ticked-off' and any further developmental outcomes were identified.

Although the general approach to setting WBL goals was similar amongst the three organisations, it was clear that differences in employer stances on recognition of WBL valued outcomes and WBL instrumentality had an impact on their subsequent approach to goal setting. In particular, organisational and individual needs and WBL resource identification were identified with varying
degrees of employer-employee negotiation, and employers differed on their usage of the various forms of WBL.

Employer A (non-liP)

The main elements of the WBL goal setting process specific to organisation A were:

- Employer A was extremely prescriptive in their approach and allocated formal WBL resources, in the form of generic and departmentally-specific courses, to address organisational outcomes for each job.

- They negotiated a timetable for achievement of these goals and any additional individual WBL requirements with each employee, for example, they would try to match an internal or external course with a new developmental need identified by an individual, consistent with their bias towards formal WBL.

- Employer A advertised lists of courses through a weekly newsletter as a means of communicating WBL opportunities to employees.

- A library was established to store books bought for courses as an open access resource for all employees.

- Employer A had no evaluation system for informal WBL, consistent with their approach throughout.

Employer B (liP Process)

Organisation B was in the process of rejuvenating their developmental policy as part of the liP process. The developmental policy, prior to liP, experienced by employees B1 as described by the employer closely resembled the approach adopted by organisation A. Elements specific to the developmental policy, during liP, as experienced by employees B2, were:

- Employer B was flexible in their approach to the allocation of WBL resources to address developmental needs, which was based on what best suited the individual’s learning style and situational factors. For example, an individual based in a geographically isolated
branch would not be expected to travel long distances to attend a training course, another WBL resource would be utilised instead, such as a trainer visiting the branch. Various forms of WBL would be utilised in a complementary fashion.

- Employer B set what they termed ‘SMART’ objectives, where set goals would have to be specific, measurable, achievable, realistic and timetabled.

- Employer B stressed the importance of employee responsibility for development and ownership of goals identified in their appraisal. Individuals would be expected to bring attention (both in appraisals and between appraisals) to developmental needs that were being neglected within the organisation.

- To support employees in this, employer B offered access to a ‘self-development’ library where individuals were able to explore a selection of courses, study educational literature and discuss other informal WBL opportunities with resident trainers.

- In addition to this posters would be utilised to advertise new courses (internal/external) being offered. Lists of courses were provided to line managers, who were expected to filter the appropriate information down to employees.

- Line managers had “Effective Managers Packs” where they should provide documentary evidence of what they have done to encourage employee self-development. The modules in these packs include: communicating goals; induction orientation; performance planning; training record; evaluation; encouraging self-development. The training department making checks that the development policy is being implemented periodically.

- Employer B was also planning to communicate how training and development resources are actually allocated through the introduction of specially designed pamphlets. Employer B recognises that, although employees may be aware of how the training and development system works in relation to the production of individual development pathways, they do not know how resources are actually allocated. Thus an individual, for example, may be timetabled to attend a training course that does not materialise and in most cases will not be aware of the reason for that. The organisation’s silence on the matter may make them feel undervalued and unimportant which has serious consequences for their morale.
Employer B did not feel that they sufficiently evaluated informal WBL. However, as all types of WBL were assigned to address needs on the individual development pathways, when this was next reviewed during appraisal any informal WBL that had been allocated to address a need would be 'ticked-off' and the employee asked how useful it had been. Employer B felt that they could do better in evaluating informal WBL, especially semi-structured types such as coaching, taking time to reflect on how it had been performed and how useful it was. Employer B highlighted that the system for evaluating more informal types of WBL would necessarily be less structured than evaluation of formal WBL because of the very nature and wide-ranging scope of informal WBL. It may not be practical to evaluate WBL opportunities at the very extreme informal pole of the WBL continuum, such as the everyday occurrence of simply asking somebody a question.

Employer C (IIP status recognised)

The approach of organisation C to WBL goal setting shared many elements with the approach of organisation B (during IIP process), the elements specific to this organisation were:

- Employer C would allocate whatever WBL resource, whether formal or informal, they thought most suited the developmental need and the individual in question. Different types of WBL being used in a complementary fashion.

- They stressed the importance of employee responsibility to identify needs and take ownership of WBL goals.
• Provide employees with induction packs containing a number of modules explaining the WBL system.

• Stationed a trainer at all branches to provide support, advice and information.

• Recognised that individual employees did not see what was going on 'behind the scenes' to help them develop, and a system may need to be put in place to overcome this.

• In addition to the implementation of pre- and post-training discussions, employer C, also followed up employees three to four months after they have attended a course or workshop. The aim of this follow-up was to see if the training has influenced employee behaviour and whether it has benefited them at all.

• In common with employer B, employer C did not feel that they sufficiently evaluated informal WBL, and could do better particularly in the cases of semi-formal learning such as coaching.

Employees viewed the use of the appraisal system for WBL goal setting positively as it gave individuals the opportunity to discuss their individual developmental outcomes and negotiate appropriate training plans with their line manager. However, the differences in employer approaches to goal setting gave rise to differences in employee perceptions of the goal setting process, which were particularly noticeable between pre and post-IIP groups.

4.5.1 PERCEPTIONS OF PRE-IIP GROUPS

Employees in the pre-IIP groups A and B1 perceived dissonance between employer-employee perspectives of learning goal setting, and raised three specific concerns regarding the setting of learning goals:

1. Organisational need-resource mismatch, non-delivery of WBL resources and restricted range of WBL resources offered.

2. Line manager differences impacting on WBL system;

3. Lack of communication, feedback and flexibility in negotiation.
1) Organisational need-resources mismatch, non-delivery of WBL resources and restricted range of WBL resources offered

There seemed to be a mismatch between organisation-wide implementation of learning schemes and individual training pathways that resulted from the appraisal system. For example, although an individual may have a specific training pathway they may find that they are sent on a course of little or no relevance to them simply because somebody from the department was required to attend. Organisational goals, particularly in organisation A, were perceived as the identification of company-wide courses that were to be implemented, and specifying the number of individuals who had to attend each course. The organisational approach seems to be that it is sufficient to identify a set of requisite generic and specific skills for each job rather than the individual. Although this information was provided in a training pack distributed in appraisal sessions, the training pack was deemed difficult to understand and as not providing the information necessary for effective need identification. Employees felt that this led to implementation of WBL that was not linked to employee needs. Whilst pre-liP organisations outwardly supported the concept of a tailored developmental pathway in order to avoid inappropriate learning opportunities being presented to employees, pre-liP employees clearly did not feel that their pathways were suitably tailored.

Pre-liP organisations were criticised for non-delivery of WBL resources identified in appraisal. For example, employees A described specific in-house/external courses or mentors being matched to a need but not actually being provided. Employees perceived the lack of financial aid to support the variety of training needed as a significant barrier to resource provision. The non-delivery of resources indicated to employees that the WBL system was ineffective and reduced their confidence in it. Employer B was particularly aware of the issue of non-delivery and as part of the restructuring of the WBL system introduced mechanisms to counteract such problems.

It was emphasised in the previous section that employer A valued formal WBL more than informal WBL. The organisation's focus on formal WBL led to a range of courses being offered on either a voluntary or compulsory basis, rather that exploiting the full range of WBL opportunities. Employees A perceived this over-reliance on formal courses as restrictive reducing the potential range of resources for addressing needs and impairing the effectiveness of the WBL system to satisfy needs.
2) Line manager differences

Pre-IIP groups were particularly anxious about the differences in line managers’ attitudes to the WBL system. Some managers were perceived as being very aware of individual needs and available WBL resources whilst others were not, resulting in great inter-departmental differences in the scope of individual needs identified and resource allocation. Thus, regardless of the principles of the overall WBL system, WBL effectiveness was perceived as depending on your department and line manager.

Again employer B was aware of this problem and sought to resolve this issue through the introduction of ‘Effective Manager Packs’ described above.

3) Lack of communication, feedback and flexibility in negotiation

Open, reciprocal communication was underlined as one of the key areas for improvement that would facilitate the development of WBL schemes. Employees from organisations A and B1 felt that there was a lack of communication between employer and employees with regard to WBL and employee development. In particular, these employees highlighted a lack of feedback both pre- and post-training, i.e. how learning would be beneficial and whether they had gained the anticipated benefits. That is, for employees B1 and especially A there was a confusion regarding what the organisation was trying to achieve and how that particular approach was going to benefit organisation and employee alike. Lack of communication and feedback tended to leave employees feeling ‘why bother’, indicating that the utility of WBL was not being promoted by the organisations. Furthermore, a lack of flexibility in negotiations led employees to feel helpless and lack ownership of WBL goals.

Employees indicated that the evaluation and feedback methods used by the three organisations affected their perceptions of the efficacy of WBL, both currently and in the future. Pre-IIP groups noted a general lack of assessment regarding the usefulness of WBL to either the individual or organisation. For example, where employees informed their employer that a particular course was not useful or well run, it was important that these complaints were acted upon. Seeing the same course being offered again the next year despite their complaints particularly demotivated employees.
4.5.2 PERCEPTIONS OF POST-IIP GROUPS

Post-IIP employees B2 and C were enthusiastic about the system for setting learning goals and were encouraged that in general the system seemed to be working well. They felt that the appraisal systems had undergone major modifications post-IIP, which was a major step forward for both organisations. In particular employees B2 and C praised:

1. Focused and specific nature of WBL goals;

2. Flexibility in negotiation;

3. Improved communication and understanding of organisational approach to WBL and potential benefits;

4. Better understanding of improved WBL support structures.

1) Focused and specific nature of WBL goals

Employees B2 and C felt that the current WBL goal setting system provided them with clear pathways and objectives. A performance-planning schedule was devised, through negotiation between line manager and employee, for each individual, detailing outcomes and identifying the appropriate WBL resource that would address those outcomes. They praised the system for being more specific and focused. Individuals had a clear idea of what they had to achieve as more specific objectives had been set, and, as the necessary WBL resources had been identified in the appraisal session, they knew how they were to set about addressing these objectives.

2) Flexibility in negotiation

Employees praised the allowance for individual input into the negotiation of need and resource identification. They felt that they had more ownership of the WBL goals set and felt more responsibility for the actual achievement of those goals. Furthermore, employees felt that the goal setting process was more of a partnership between employer and employees. This was particularly important as they felt it was essential that WBL was not entirely organisation-led.

3) Improved Communication and Understanding of Organisational Approach to WBL and potential benefits
Employees B2 and C emphasised that one of the key benefits achieved through their organisation going through the LiP process was that the organisations had realised the need to improve communication regarding employee development. In consequence communication was perceived as more open and reciprocal, leading to increased employee awareness of WBL opportunities, and more relevant developmental pathways that were more consistent amongst employees. Line managers were more frequently involved in pre- and post-WBL feedback and more regular monitoring of employee progress, which employees felt heightened the 'visibility' of WBL benefits. Manager and employee would discuss issues such as the relevance and pragmatic application of a WBL opportunity towards both individual and organisational benefits. Employees appreciated the WBL evaluation forms provided by the organisation as this gave individuals a channel for communicating their views to the organisation. There was, however, very little dissemination of information gained from individual participation in WBL to other employees.

In common with employees, employers B and C were particularly aware of the importance of evaluating all forms of WBL where possible, so that the effectiveness of WBL resources could be assessed and the organisation could use this information to see how they should move forward with development. Evaluation was viewed as an essential part of the training cycle, and using feedback from WBL to inform future developmental processes was vital if the organisation were to develop a learning culture. However, all three employers felt that they had a long way to go to achieve their definitive 'training' cycle.

Despite positive perceptions of line management by employees B2, employer B estimated that only 10% of line managers actually carried out pre and post-training interviews properly if at all. Indeed, employer C also felt that there were still negative differences in line management approaches to WBL.

Furthermore, employees B2 and C felt they had a clearer understanding of how the organisational approach was going to achieve developmental goals, whether organisational or individual. For them, it was not enough to simply appreciate that WBL could promote individual development, it was equally important that they understood the organisational policy regarding WBL and how they fitted into this policy. Communication was therefore indicated as an important precursor to the success of any WBL scheme.
4) Better Understanding of Improved WBL Support Structures

Employees felt that the WBL support structures had also dramatically improved post-lip. They also felt that the elements of specific focused goals, flexibility and improved communications led to a better understanding of the support structures that were in place to facilitate WBL. In particular, they knew where to obtain support they needed for their own development. They felt they could always approach the training department between appraisals to discuss any new outcomes that they had identified, the ‘door was always open’ to the training department.

4.5.3 CULTURAL CHANGE

Employers B and C felt that a major issue in the success of WBL was to bring about change in the organisational culture. The aim was to move from an authoritarian organisation, where the training department was responsible for and dictated training, to an organisation where responsibility for development was spread across all departments, with managers shouldering responsibility for their staff and the training department playing a more facilitative and supportive role. This process required the redefining of roles throughout the organisational hierarchy and consequently changing the attitudes of employees at all levels to development. This included changing the perception that development was the exclusive domain of the training department, highlighting the responsibility that all employees must take in developmental issues and that there was more to learning than a formal course. A lot of ideas from the old culture about training and development simply did not have a place in the new and more progressive culture, where individual responsibilities for learning and development were being redefined throughout the whole hierarchy.

Employees B and C highlighted the following problems that needed to be resolved to facilitate cultural change.

It was felt that if the training department did not have a high profile then this would have detrimental effects on individual employee perceptions of training and development. However, whilst employer A believed that encouraging development depended solely on raising the profile of the training department, employers B and C felt that making individual employees understand their own responsibility for development was the key to greater success. In order to achieve this they felt that the first step was to raise the profile of the training department, which might lead to a
higher value being placed on WBL and thus encouraging employee involvement. Further steps may involve en masse re-education of what training, learning and development actually mean, and overcoming prejudices and cynicism among employees regarding the organisations' motives for implementing change and the potential success of such changes.

Although there were systems in place, such as induction packs and effective manager packs, these were often not used properly, which diminished the effectiveness of the organisations' training and development policy. Employers B and C were also aware that the appraisal systems were not always being implemented in the way that they should be by line managers, possibly due to their attitude to WBL, formal and informal. Some managers did not like the changes especially with regards to taking on extra training and LiP, but employer B stated that they would have to change. However, employer B suggested that they were beginning to see changes in management thinking focusing on appropriate 'training' rather than paperwork.

Policy makers were not always in touch with the network of employees leading to conflict between those 'on the shop floor' who faced problems implementing the training and development policy and policy makers who did not fully understand and compensate for such problems.

It was felt that even though the 'training' policy was communicated to individual employees there was still a barrier concerning employee perceptions of what training and development actually meant, and their responsibility for development. Some employees and line managers still felt of training and development as 'courses' and did not fully appreciate the full scope of learning opportunities. Individuals might view the appraisal system as part of the old culture where they go through a process of evaluation culminating in a report on their performance. The new system of appraisal however should be viewed as an opportunity to identify development outcomes and actually allocate or identify potential resources that would address that need. Employer A did recognise that some individuals did not view training as an important activity, even though the continual change within the industry would inevitably lead to skills gaps which needed to be fulfilled. Furthermore, employer C suggested that employees did not always view learning as ongoing, and there was a need to re-educate employees to promote the concept of continual development. Indeed, employer A suggested that many employees did not respond to the changing environment and hence needed to be re-educated.
Chapter 4 – Initial Development of a WBL-Motivation Model

If individuals did not accurately understand the rationale behind organisational development and resource allocation policies then they may have negative perceptions that are detrimental to the organisation and the success of WBL.

4.6 WBL GOAL ACCEPTANCE AND EXPECTANCY

It was noticeable that the pre-liP approach to WBL goal setting lacked the key elements indicated in the success of goal setting:

- Specific and focused goals;
- Feedback and communication;

Where post-liP organisations B and C incorporated such elements, employees had a positive perception of learning and its potential effectiveness. In contrast to pre-liP groups who felt that the approach was lacking and likely to be ineffective. This confirmed their view that their respective organisations were not committed to WBL and did not utilise WBL effectively. In consequence employees B1 and A stated that they often had difficulty in accepting goals set by the organisations, which may have serious adverse effects on the attainment of goals (Cross 1981). In contrast employees B2 and C readily accepted the learning goals set within the organisation.

Goal acceptance, as defined by employees, represents an element of employee confidence, where individuals assess whether they feel that they can achieve a goal based on goal characteristics, such as relevance, specificity and realism. Goal acceptance was also based on a perception of their own ability to successfully participate in WBL (expectancy). However, employees stressed the impact of the organisational approach on perceptions of individual efficacy in WBL, where individuals perceived their own ability to achieve goals as intricately linked to the organisational ability to deliver an effective WBL system. Similar links between organisational efficacy and individual efficacy has been found elsewhere (Mathieu et al 1990, Tannenbaum et al 1991). This is particularly important as Tannenbaum and Yukl (1992) have found that self-efficacy leads to increased training effectiveness and increased resilience.
It should be noted that whilst the concept of expectancy was originally placed earlier in the model, alongside valence and instrumentality, and goal acceptance is traditionally part of goal setting, participants described both concepts as outcomes following the goal setting process hence their positioning in the current model.

4.7 FACTORS AFFECTING PARTICIPATION

Although actual participation rates were not explicitly assessed within this project, employers and employees alike recognised three main issues influential in WBL participation: financial; temporal; personnel. Whilst some of these issues impacted more on formal WBL (such as financial aspects), other issues affected both informal and formal WBL (for example, individual attitudes and time pressures). Whilst many of these pragmatic issues may seem obvious, individuals reported that they had a significant impact on their WBL participation rates. Organisations may need to provide structures that facilitate the WBL process by addressing some of these issues, although it was noted that organisations differed in their approach to problem recognition and resolution, for example, provision of financial help and study leave.

The main issues influential in WBL participation are expanded below.

4.7.1 FINANCIAL

It was clear that one of the most common barriers with regard to training courses was the financial cost of courses and books. Where organisations ran schemes where fees were paid in whole or in part there was evidence of greater participation and enthusiasm amongst employees to participate. However, some course fees were high and required an initial ‘lump sum’ payment, which placed a heavy financial burden on the individual.

All three employers felt that their training budgets were quite generous, which was practically supportive and for them a symbol of commitment by an organisation to development, which was also encouraging to employees. However, often this budget was still not enough to cope with the developmental demands from employees and could lead to delays in the delivery of WBL solutions. In particular, delivery of individual WBL activities was often delayed by the organisational dictates that mandatory WBL activities were given funding priority. As discussed above in the previous section, the potentially negative effect on employees was highlighted by
employer B who planned to make the prioritisation process transparent to counteract this effect on employees by helping them to understand the rationale behind the organisation's approach.

The delivery and administration costs associated with formal WBL were sometimes expensive especially when organisations participated in external courses or employed the services of a consultant. Consultants were not only expensive in terms of fees charged but also through the equipment and facilities that they demanded, such as large amounts of photocopying. Employers were, therefore, necessarily selective in choosing which external course or other formal services they utilised. Indeed, it was suggested by employer C that the high value placed on informal WBL by the organisation may be cost-driven. The decision to participate in external courses or employ a consultant may be based on a lack of expertise in the organisation (as for employer A) or on the differential professional requirements of employees (as for employers B and C).

Although employer A had a bias towards formal WBL they preferred to deliver courses themselves and only used external resources if they did not have the required expertise within the organisation. However, they were sometimes constrained by top-level management who equated an expensive consultant led course with quality and did not entertain suggestions that they use a cheaper, often better, alternative such as a college course. Furthermore, they also paid 80% of the fees for courses not directly linked to the business outcomes and 50% towards the cost of books required for that course. Employer B allowed all employees to attend a professional banking course as this was deemed essential to the organisation, offering financial incentives to those who completed the course. However, they only offered NVQs to the under-25s as they received funding from the local Training and Enterprise Council (TEC), although they were planning to offer this opportunity to a wider range of people in the future depending on its success. Employer C based available professional opportunities on an individual's position in the organisation's hierarchy; management level employees and trainees were able to attend external professional courses leading to certificates/qualifications, lower grades, such as supervisors, were financed to go on internally delivered courses that were run on a modular basis. However, this organisation would only commit itself financially to development of employees who worked for the organisation for six months of more, employees on short-term contracts for specific jobs were not invested in. This is consistent with the organisation's old and long-term policy of rewarding loyalty.
4.7.2 TEMPORAL

Another major obstacle was the amount of time demanded, by formal WBL courses in particular, to complete the required study. Individuals sometimes felt that they could not invest this sort of energy into schemes particularly when they impeded on time allocated to their families or other important leisure pursuits. However, time management pressures at work also resulted in informal learning being neglected - individuals were simply too busy to think about what they might learn from everyday experiences or spend time demonstrating skills to colleagues. Furthermore, individuals were often not able to take time off work to study or attend seminars as those colleagues remaining behind in the work place would not be able to cover the workload.

'All three employers agreed that the development of employees was time-consuming both to the training department and the individuals concerned, which sometimes delayed the delivery of WBL resources to address individuals' developmental goals. This seemed to be a particular problem for employer B who only had two trainers working in the department who were not always able to cope with the demands placed on them, slowing up the delivery of 'training'.

It was also recognised that employees were sometimes too busy in their day-to-day work to attend formal courses or invest time in informal WBL. Employer A, for example, found that employees would often turn up to courses late or leave early through work commitments or sometimes did not attend. All three employers suggested that this was a negative aspect of 'lean' staffing levels where individuals from departments could not be spared or if they did attend a course nobody was available to cover their workload. Indeed, employer C viewed this problem as a particular obstacle to informal WBL. Employees had 'heavy' workloads and would often be disturbed in their day-to-day work. They have little time to reflect on what they are doing or even how they are doing it, much less to read a book on how to go through a process correctly. Furthermore, where employees are on the front-line they find that customers are not very patient when a new employee is being trained, for example. Employer C also suggested that there might be seasonal effects on all types of WBL. As summer is the peak time for people taking leave, staff levels that were already 'lean' will have further pressure exerted on them and hence there is even less time for learning. Winter may be the peak time for development and learning when staffing levels are at capacity and in fact the bulk of training in organisation C is scheduled for winter.
All three employers did, however, try to give time off for exams and study leave, although the extent of leave given varied among departments and their respective staffing levels. In the case of employer C this would also depend on your position in the organisational hierarchy, where more study leave was given to management level employees and trainees than lower graded employees.

4.7.3 PERSONNEL

The nature of WBL requires a commitment to development from all levels of employees from the top downwards. However, employers and employees recognised that while some employees had very positive attitudes towards learning and development, others had negative attitudes especially in taking responsibility for their own development. This occurred throughout the hierarchy, including management level employees, hence there were departmental or inter-branch differences in terms of the support offered to employees and the demand for development from employees themselves. Some line managers were extremely supportive and accepted their responsibility for staff development eagerly and others did not accept that responsibility at all.

Employer C suggested that inter-branch differences in developmental demands may be a product of varying staff turnovers, those who had a high turnover also had a higher demand for employee development and tended to be pro-WBL, more stagnant branches tended to have a lower demand for employee development and hence were less receptive to WBL. It was recognised that a negative attitude towards WBL seriously hindered its development by:

- Organisational systems not being properly implemented;
- Lack of commitment to WBL reduced the amount of energy invested in learning and reduced its success.

There was also a high degree of organisational frustration resulting from investing time and money into the development of an employee who subsequently leaves the organisation for another job. Employer A found this a particular problem in their sales department. This was part of the rationale behind the policy of employer C to keep investment in employee development at a minimum for the first six months of their employment, rewarding employee commitment with organisational commitment. This can be demonstrated by examples given by employer A who
often faced the problem of employees withdrawing from courses without good reason. Indeed, some individuals did not complete courses as they had gained promotion while they were studying; this had been their aim in the first place so there was no reason for them to continue. This was doubly frustrating to the training department as they received no compensation and there was no end product for their investment, especially when somebody else could have successfully filled this place.

Apart from the differential support available from line managers, organisations could demonstrate their own support through open access to training departments and information relating to development. Indeed, employer C showed their commitment very positively by stationing a trainer at every branch to provide support, advice and information.

Employer C also pointed out that the geography of Wales sometimes posed problems in terms of implementing training. Although not such a big problem in South Wales, this employer had branches in quite isolated parts of West Wales, which meant that travelling from branch to branch, or even to Cardiff or Bristol to attend courses was sometimes very difficult. In this event the employer would usually transport the trainer to the branch or utilise a more informal type of WBL to address the need rather than employees travelling.

**4.8 OUTCOMES OF THE WBL-MOTIVATION PROCESS**

A major outcome of the WBL-motivation process from the employee perspective was their reaction to the WBL system assessed in terms of overall satisfaction. Locke (1991) stresses the importance of need-satisfaction in the motivation process; individuals must feel that their initial needs have been fulfilled through the action taken or this may have serious implications for future motivation. The evidence from this project suggests that satisfaction was composed of cognitive and emotional elements resulting from employee perceptions of the WBL-motivation process, which were clearly important issues for participants. In particular, they felt that these cognitions and emotions could greatly influence their attitude to WBL as a whole, questioning its usefulness in the workplace and impacting on the longevity of WBL initiatives in the workplace; they felt that a lack of enthusiasm for such opportunities would lead them to ‘fizzle out’.
4.8.1 EMOTIONAL OUTCOMES

In terms of emotional outcomes, there was again a notable contrast between pre-liP group and post-liP group reactions.

Pre-liP groups felt that the current WBL system did not adequately meet their development needs, which led them to feel a lack of enthusiasm for the process. Employees A and B1 felt that the lack of need-satisfaction was due mainly to the lack of perceived organisational commitment, lack of investment and evaluation of WBL, in other words, the perceived organisational approach to WBL. Furthermore, this group of employees felt undervalued by their respective organisations because of their perceived lukewarm attitude towards employee development.

Post-liP groups felt that the current WBL system did, in general, adequately satisfy their developmental needs, which led them to feel more enthusiastic about the process. Employees B2 and C stated that the organisational approach to WBL increased their morale and commitment to the organisation and WBL and overall job satisfaction was increased. They felt an integral member of the organisation and were ultimately satisfied by this approach. They further indicated that the organisational approach to WBL renewed their interest in work and learning opportunities promoted by the organisation and provided a source of variety in their everyday work lives.

It should be noted, however, that all three employers felt that they were fairly successful in providing the relevant WBL resources for each individual, although sometimes there may be inevitable delays and sometimes mistakes were made. In this respect employer A was clearly unaware of the strength of employee feelings with regard to inadequacies in the current WBL system. Employer B demonstrated greater awareness of employee concerns through their efforts to address problematic issues in their restructuring of the WBL system, a process that employer C seemed to have successfully completed.

4.8.2 COGNITIVE APPRAISAL AND ASSOCIATED CONFIDENCE

As discussed above, non-delivery of resources, lack of evaluation of WBL and a lack of feedback led individuals to feel less confident in the organisational WBL system and heightened perceptions of WBL inefficacy. Employee comments suggested that perceptions of the organisational approach to learning could actually be damaging individual perceptions of WBL in general. As
consistently found throughout the chapter, there was a particular contrast between pre-liP and post-liP groups, where post liP groups were noticeably more confident in their WBL system than pre-liP groups who questioned the efficacy of the system.

Pre-liP employees negatively appraised the WBL system, which they felt was reactive, focusing on solving ‘problems’ rather than promoting continual development for the future. Employees A and B1 felt that the organisations did not explore the efficacy of WBL projects or exploit them to their fullest, e.g. seeking to support employees put their learning into practice.

"(WBL) tends to be forgotten .. oh! you've passed it, put it in your report for last year and then it's never mentioned again"

(Employee A)

Hence, individuals were often disillusioned with WBL as an effective resource for both themselves and for the organisation. They lacked confidence in the system and stated that they were discouraged from participating in and exploiting WBL opportunities. Indeed, a lack of confidence led them to question the relevance of WBL to themselves.

"It tends to make you feel why bother?"

(Employee B1)

This may lie behind the problems mentioned by employer A that the organisation was experiencing in encouraging individuals to participate and the high ‘drop-out’ rate from formal training courses.

Post liP groups stated that they had long-term confidence in the stability of the organisational approach to WBL. Employees felt that throughout the organisation individual attitudes were changing towards WBL and developmental roles were being redefined. They were particularly encouraged by the visible and active organisational investment in training and development. Most importantly employees highlighted that increased confidence in the system encouraged them to participate in and attempt to more fully exploit WBL opportunities.
"iiP has been very good for the (company) ... they have made everyone aware of training and development ... I am encouraged by these developments."

(Employee C)

In addition, employees felt that increased confidence gained through WBL impacted positively on their job performance.

Thus confidence in the learning system was highlighted, not only as an importance element in goal acceptance, but also as an important outcome of the WBL process, which may influence future attitudes towards WBL. Cognitive appraisals and associated confidence are thus seen as outcomes of the process, which will potentially feedback into the model and potentially affect future motivation in WBL. Participants felt that a perceived lack of need-satisfaction led to reduced confidence in WBL, which they felt lowered their future expectations of WBL and thus influenced their overall attitude to WBL. Similarly, positive perceptions of need-satisfaction led to heightened confidence in and expectations of WBL, and hence, a more positive attitude and approach to future WBL opportunities. Thus the importance of confidence in the WBL system is emphasised, employees need to have positive expectations of WBL, believing that the WBL system will work for them, if they are to exploit it.

The importance of the organisational approach and context is again underlined here, having a significant impact on an individual’s expectations of WBL. This is illustrated by the difference in employees B1 (pre-iiP) and employees B2 (post-iiP), the latter group holding more positive expectations about WBL than the former. In addition, individuals were attributing the success or lack of success of WBL to the organisational policy rather than to their own efforts to learn, and thus confidence was based on an assessment of the organisational ability as well as their own. This is reinforced by the discussion of WBL definitions (section 4.2), which employees tended to refer to as training; something that is done to them rather than something they do for themselves.

4.9 INITIAL DEVELOPMENT OF THE WBL-MOTIVATION MODEL

This chapter has discussed the WBL-motivation process, based on an initial framework that identified key stages in the motivation cycle, including, needs, values, goal setting, behaviour and outcomes (Locke and Henne 1986, Locke 1991). The framework has proved to be useful in
guiding exploration of organisational and employee perspectives of WBL, where this chapter has sought to define framework stages more clearly and specifically in relation to WBL.

In particular, this chapter has indicated that:

- Employers and employees alike perceived WBL as serving two main sets of valued outcomes, namely, work development and personal development outcomes. Theoretically, an important foundation for motivation is for individuals to perceive these outcomes as valent to themselves.

- Employees made a distinction between the perceived instrumentality of formal and informal WBL, where they often favoured informal WBL. Employer A tended to favour formal WBL, whereas employers B and C valued all forms of learning.

- Important elements in WBL goal setting strongly echoed those elements stressed in general goal setting theory, namely, the setting of specific, focused goals, flexibility in negotiation, improved employee-employer communication, provision of appropriate support, feedback and evaluation of WBL.

- Employers and employees identified financial, temporal and personnel (including attitudes to learning) issues as particularly salient in participation rates.

Furthermore, the evidence from the focus groups indicates that employee perceptions of the organisation allied with the provision of appropriate employee support may have an important role to play in promoting employee motivation in WBL. In particular, employees highlighted the importance of:

- Perceived organisational understanding of their needs in relation to WBL.

- Perceived organisational value and commitment to WBL, which may be influenced by visible signs of active investment.

- The interaction between employer and employee at the goal-setting stage, particularly between flexibility in negotiation between line manager and employee.
• Appropriate linking and delivering of WBL resources to address employee needs.

• The importance of the organisational developmental policy and the employee's understanding of this policy.

Employees indicated that goal acceptance and, ultimately, satisfaction in the system were likely to be highly influenced by perceptions of the organisational approach to WBL, particularly in relation to the above points. Thus employees stressed not behavioural but cognitive and emotional outcomes from the WBL systems. In particular, employee satisfaction in the WBL system may have important implications for the longevity of WBL initiatives in the workplace;

• Whether employees are prepared to invest energy to exploit WBL opportunities to the full or;

• Whether they simply 'go through the motions' but do not gain anything from the experience.

It has been recognised for a long time that effective evaluation should include trainee reactions to training (Kirkpatrick 1967, Warr, Bird and Rackham 1978). These reactions to training should be broader than simply asking whether trainees enjoyed training but should include cognitive elements relating to how useful the training was perceived to be (Warr et al 1999). The outcomes from this stage of model development would support these proposals; particularly that satisfaction is composed of a cognitive element as well as an emotional element.

A tentative model has been devised from the preliminary findings of this research and is illustrated in figure 4.5 incorporating factors summarised above. This model demonstrates the potential for dissonance in employer-employee perspectives at all stages of the motivation process. The organisation and the individual operate in parallel and the focus groups have demonstrated quite clearly the potential influence that the organisation may have on the individual. It is proposed that, for WBL to be successful, organisational and individual perceptions should be aligned throughout the whole process, hence the inclusion of arrows indicating the input of the organisation and individual at each stage. These inputs may in reality represent the lines of communication between the individual and the organisation, if these lines of communication break down then the
success of WBL may be seriously hindered. This has been shown in the adverse effect that an organisation’s approach to WBL seems to have had on individual perceptions of WBL.

Motivational perspectives are important in WBL as they may enhance our understanding of the design and uptake of WBL schemes. However, the multi-stage motivation process highlights its potential complexity. This is further complicated by employer-employee interactions through the process, which may be synergistic or antagonistic in nature impacting on employee motivation. While interactions between the groups can encourage growth and self-development and can be mutually beneficial to the groups concerned, the environment can be unstable and lack employer commitment, which can seriously hinder the effectiveness of WBL. Indeed, Noe and Wilk (1993) have highlighted the important effect that organisational policy may have on employees and participation in development activities.

It should be noted at this stage that, given that model development is a long process, it is recognised that a structured, staged approach is necessary to make the process more manageable. Several routes of model development were available and it was necessary to select and focus on a particular route. Accordingly, two major decisions about model development were
taken. Firstly, as indicated in chapter one, the aim of this study was to produce a micro-model of employee motivational perspectives in WBL. The decision to focus on employee perspectives was based on the assumptions that individual learning forms the first building block in the route to successful organisational learning (Senge 1990, Argyris 1999), and that, more fundamentally, individual motivation underpins individual learning (McCombs 1991, Noe and Wilk 1993). Indeed, this discussion clearly emphasised the importance of employee perceptions of the organisational approach to WBL in the motivation process. The perception that the organisational approach is congruent or dissonant with employees' own views seems very important to employees, whether their perceptions are a true reflection of the situation or not. Organisational motivational perspectives offered another route for model development that could be pursued in future research. Secondly, from this stage onwards there was a conscious focus on the 'emotional' and 'cognitive' outcomes (satisfaction) of the WBL-motivation process rather than on performance, as this was clearly stressed within stage one focus groups as important to employees. Furthermore, performance on some tasks is often controlled more by ability than motivation, thus performance itself will not be the focus of this particular study, although this issue offers opportunities for future research (Darkenwald and Merriam 1982, Mitchell 1982, Ajzen 1988). Thus model development from this point onwards focused on a micro model of employee perspectives in the WBL-motivation process. Employee perspectives are represented in the following model (figure 4.6).

![Figure 4.6: The WBL-motivation process from the employee perspective](image)

Thus the next stage of the research aims to test the relative importance of employees' own orientations and their perceptions of the organisation in relation to the WBL-motivation process. If,
as this stage suggests, the perceptions of the organisational approach to WBL is highly influential in employees' own reactions and approach to WBL then this will have important implications for WBL as a whole. Arguably, WBL, especially informal WBL, can take place with or without organisational support, that is, employees can learn from experience or discussion with others. However, the effectiveness of spontaneous WBL may be curbed by the organisational approach.

This chapter has explored the WBL-motivation process from the employer and the employee perspectives and indicated how the initial framework can be modified to incorporate these perspectives. In addition, this chapter has developed a model of the WBL-motivation process based on employee perceptions and explored how each stage in the motivation process may be defined. The next chapter aims to consolidate these definitions through use of factor analytic techniques and modify the model accordingly.
CHAPTER 5

DEVELOPING FACTORS IN WBL-MOTIVATION MODEL
Chapter 5 – Developing Factors in WBL-Motivation Model

Developing Factors in WBL-Motivation Model

The previous chapter presented the results from stage one of this thesis, developing a model of motivational perspectives in WBL, which was based on a generic motivation framework. This chapter presents the results from stage two of the thesis that aims to further develop this model by focusing solely on the employee perspective (figure 5.1).

Figure 5.1: The motivation-WBL process from an employee perspective

Thus this chapter aims specifically to address objective five:

- To more fully develop the definition and nature of factors underlying motivational perspectives in WBL from an employee perspective and amend the model accordingly.

5.1 METHOD SUMMARY

In order to explore the nature of the factors underlying the WBL-motivation process, factor analytic techniques were used to examine the interrelationships between items on a motivation questionnaire (appendix 6). This questionnaire, developed specifically for this project, is composed of items relating to the WBL-motivation process that were generated from the initial focus groups (chapter 3, section 3.3.2) and were hypothesised to assess the five main factors identified in the model (figure 5.1 above):
Chapter 5 – Developing Factors in WBL-Motivation Model

- Valued WBL outcomes (work outcomes and personal development outcomes);
- Instrumentality of WBL (value formal WBL, value informal WBL);
- Employee perceptions of the organisation in relation to WBL (organisation recognise needs, organisation value and are committed to WBL);
- WBL goal setting processes;
- Outcomes of the WBL-motivation process (goal acceptance & expectancy and satisfaction).

The questionnaire also included the ‘Attitudes and Emotions’ scale from the LDQ (Honey and Mumford 1990) and a personal profile section to assess demographic details.

This chapter, therefore, specifically aims:

- To further explore the nature of these five main factors and refine factor definition;
- To assess the internal structure of the research-specific questionnaire.

Exploration of the five main factors was based on both the initial piloting of the questionnaire (using Principal Components Analysis – PCA) and a subsequent cohort of questionnaires (using Alpha Factor Analysis - AFA). The five main factors in the model are explored separately using the following structure:

**Step 1** Assessment of the number of dimensions generated by each main factor using the Scree Test and Parallel Analysis (PA) - (see chapter 3, section 3.3.4);

**Step 2** Extraction (using PCA) and assessment of factors against specified criteria: theoretical sense, magnitude of factor loadings and simple structure, patterns of inter-item correlations and residuals, percentage of variance explained and communalities - (see chapter 3, section 3.3.4);

**Step 3** Initial acceptance of a particular factor solution;

**Step 4** Confirmation of the accepted factor solution (AFA) and assessment of factors against specified criteria - theoretical sense, magnitude of factor loadings and simple structure, patterns of inter-item correlations and residuals, percentage of
variance and co-variance explained and communalities (described in chapter 3, section 3.3.4);

**Step 5** Acceptance of factor solution to be utilised in further analysis, which may include modifications to the initial PCA factor solution.

Each section will begin with an illustration of the model, indicating the position of the particular main factor under consideration. To conclude, the final model resulting from the PCA and AFA will be presented.

### 5.2 Valued WBL Outcomes

The first main component explored in this section is entitled ‘Valued WBL Outcomes’ (indicated in figure 5.2) and incorporated two important issues in relation to WBL:

- What employees perceived as valuable work development outcomes to be gained from WBL;
- What employees perceived as valuable personal development outcomes to be gained from WBL.

![Figure 5.2: Positioning of ‘Valued WBL Outcomes’ factor in overall model](image)

These issues are based on employee perceptions of the valued outcomes that could be gained from WBL (stage one, chapter 4, section 4.3). Although two distinct categories of WBL outcomes were identified, it was noted that they were perceived as being linked together where work development and personal development valued outcomes worked together to promote employee...
(and organisational) survival and growth. Thus it was important to determine at this stage whether work and personal developmental outcomes form one main factor or two separate factors.

**Step 1 – Scree Test and PA**

The questionnaire items (n=12) representing the ‘Valued WBL Outcomes’ factor were subject to PCA to determine the underlying factor structure. Comparison of the Scree test with the PA line (figure 5.3) indicated that the optimum number of components was two.

![Figure 5.3: Scree Test and PA for 'Valued WBL Outcomes'](image)

**Step 2 – Initial Extraction and Assessment of Factors**

The two-factor solution was extracted using PCA and evaluated using the specified criteria. However, the two factors were, not surprisingly, found to be correlated (r=0.32887) and hence oblique (Direct Oblimin) rotation was used. The resultant factor loadings after rotation are presented in table 5.1, which represents the pattern matrix and associated item communalities; all factor loadings between ±0.3 are represented as 0.
**Table 5.1: Factor loadings for 'Valued WBL Outcomes' (two-factor solution -PCA)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4 Learning at work is essential for me to keep up to date with the inevitable changes in the products and services that this organisation provides</td>
<td>.83506</td>
<td>0</td>
<td>.65519</td>
</tr>
<tr>
<td>Q3 Learning at work is essential for me to keep up-to-date with developments in information technology used by this organisation</td>
<td>.80678</td>
<td>0</td>
<td>.66321</td>
</tr>
<tr>
<td>Q6 Learning at work is needed for me to become multi-skilled and able to handle a variety of jobs and inquiries in the work-place</td>
<td>.75780</td>
<td>0</td>
<td>.58054</td>
</tr>
<tr>
<td>Q1 There is a definite need for learning in the workplace to develop my job-related knowledge and practical skills</td>
<td>.76294</td>
<td>0</td>
<td>.54814</td>
</tr>
<tr>
<td>Q2 Learning in the workplace is needed to improve how efficient and effective I am at doing my job</td>
<td>.72202</td>
<td>0</td>
<td>.58261</td>
</tr>
<tr>
<td>Q5 To survive in the workplace I need to keep actively learning at work</td>
<td>.63226</td>
<td>0</td>
<td>.49573</td>
</tr>
<tr>
<td>Q8 Learning at work is needed to promote my self-confidence</td>
<td>0</td>
<td>.80338</td>
<td>.59052</td>
</tr>
<tr>
<td>Q11 There is a need for learning at work to add a bit of variety into my everyday job-related schedule</td>
<td>0</td>
<td>.73806</td>
<td>.59743</td>
</tr>
<tr>
<td>Q12 Learning in the workplace is needed to increase the number of contacts that I have with other people whether inside or outside the workplace</td>
<td>0</td>
<td>.69723</td>
<td>.44489</td>
</tr>
<tr>
<td>Q7 I need to participate in learning at work to enhance my morale in the workplace</td>
<td>0</td>
<td>.69421</td>
<td>.49185</td>
</tr>
<tr>
<td>Q9 Learning at work is needed to increase my earning potential</td>
<td>0</td>
<td>.61918</td>
<td>.54252</td>
</tr>
<tr>
<td>Q10 There is a need for me to participate in learning in the work-place to enhance my career prospects</td>
<td>0.31350</td>
<td>.60117</td>
<td>.58365</td>
</tr>
</tbody>
</table>

Most importantly, this solution makes theoretical sense, supporting the proposal that 'Valued WBL Outcomes' is composed of two factors, as indicated in the initial focus groups:

- Factor one represents work development outcomes;
- Factor two represents personal development outcomes.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.4.4, and the results are presented in table 5.2.
Thus the solution was found to meet the assessment criteria successfully. The one factor solution was extracted for exploratory purposes but the two-factor solution was clearly superior against the assessment criteria, in particular factor loadings were typically higher, the number of residual correlations over 0.05 was much lower (50% as opposed to 81%), the two-factor solution accounted for more variance (56.5% as opposed to 39.8%) and more accurately reflected the pattern of inter-item correlations (appendix 8).

**Step 3 – Initial acceptance of factor solution**

Thus the two-factor solution seems feasible on both theoretical and statistical grounds. The two-factor solution was accepted where the 'Valued WBL Outcomes' component was composed of:

- Factor one representing work development outcomes;
- Factor two representing personal development outcomes.

**Re-wording**

Following a review of participant comments, some re-wording of items was necessary prior to the second phase of testing.

**Factor One - "Work Development Outcomes"**

During the pilot stage of this questionnaire, some respondents commented that Q2 - "Learning in the workplace is needed to improve how efficient and effective I am at doing my job" - might imply incompetence on behalf of the respondent and, therefore, may need to be re-worded to state...
‘Learning in the workplace is needed as it helps me to develop my existing efficiency and effectiveness at work’.

**Factor Two - “Personal Development Outcomes”**

Respondents also commented that Q10 ‘There is a need for me to participate in learning in the workplace to enhance my career prospects’ could be confused as referring to career prospects within the organisation rather than general opportunities and thus may confound responses, for example, by lack of opportunities for career development in the workplace. Re-wording was suggested so that the item stated ‘There is a need for me to participate in learning in the workplace to enhance my career prospects whether inside or outside this organisation’.

**Step 4 - Confirmation of factor solution**

AFA was used to confirm this two-factor structure in a new cohort. In the second set of data (number of questionnaire items=12), examination of the Scree Plot and PA line (figure 5.4) indicates a two-factor solution as indicated by the initial PCA.

![Figure 5.4: Scree Test and PA for ‘Valued WBL Outcomes’ (AFA)](image-url)
The two-factor solution was extracted using AFA and evaluated using the specified criteria. The two factors were found to be correlated \( r=0.34350 \) and hence oblique rotation (Direct Oblimin) was used. The resultant factor loadings and associated communalities after rotation are presented in Table 5.3, which represents the pattern matrix, where factor loadings between ±0.3 are represented as 0.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6</td>
<td>Learning in the workplace is needed as it helps me to develop my existing efficiency and effectiveness at work</td>
<td>.76388</td>
<td>0</td>
</tr>
<tr>
<td>Q2</td>
<td>Learning at work is essential for me to keep up-to-date with the inevitable changes in the products and services that this organisation provides</td>
<td>.75335</td>
<td>0</td>
</tr>
<tr>
<td>Q5</td>
<td>To survive in the workplace I need to keep actively learning at work</td>
<td>.68705</td>
<td>0</td>
</tr>
<tr>
<td>Q4</td>
<td>Learning at work is essential for me to keep up-to-date with developments in information technology used by this organisation</td>
<td>.63773</td>
<td>0</td>
</tr>
<tr>
<td>Q1</td>
<td>There is definitely a need for learning in the workplace to develop my job-related knowledge and practical skills</td>
<td>.57690</td>
<td>0</td>
</tr>
<tr>
<td>Q3</td>
<td>Learning at work is needed for me to become multi-skilled — able to handle a variety of jobs and inquiries in the workplace</td>
<td>.53912</td>
<td>0</td>
</tr>
<tr>
<td>Q8</td>
<td>Learning at work is needed to promote my self-confidence</td>
<td>0</td>
<td>.73214</td>
</tr>
<tr>
<td>Q12</td>
<td>Learning in the workplace is needed to increase the number of contacts that I have with other people whether inside or outside this organisation</td>
<td>0</td>
<td>.71531</td>
</tr>
<tr>
<td>Q7</td>
<td>There is a need for learning at work to add a bit of variety to my everyday job-related schedule</td>
<td>0</td>
<td>.71399</td>
</tr>
<tr>
<td>Q10</td>
<td>I need to participate in learning at work to enhance my morale in the workplace</td>
<td>0</td>
<td>.62737</td>
</tr>
<tr>
<td>Q9</td>
<td>Learning at work is needed to increase my earning potential</td>
<td>0</td>
<td>.55660</td>
</tr>
<tr>
<td>Q11</td>
<td>There is a need for me to participate in learning in the workplace to enhance my career prospects whether inside or outside this organisation</td>
<td>0</td>
<td>.47870</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>SS Loadings</th>
<th>Pct of Var</th>
<th>Cum Pct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Work Development Outcomes</td>
<td>3.556753</td>
<td>29.7</td>
<td>29.7</td>
</tr>
<tr>
<td>Factor 2: Personal Development Outcomes</td>
<td>1.66676</td>
<td>13.9</td>
<td>43.6</td>
</tr>
</tbody>
</table>

Table 5.3: Factor loadings for 'Valued WBL Outcomes' (AFA)

The solution was assessed against the criteria, as detailed in chapter 3, section 3.4.4, and the results are presented in Table 5.4.
Thus the solution met the criteria successfully, although Q3 had a communality under 0.3 and thus was less well defined by this solution than the other items (appendix 9 for inter-item correlations).

In general this solution seems acceptable both theoretically and statistically. The one-factor solution was extracted for exploratory purposes but the two-factor solution was superior in all aspects.

As these two factors are inter-related, the proportion of variance and co-variance accounted for by each factor is difficult to interpret due to the overlapping variability between factors. In such cases it is recommended that the Sum of Squared Loadings (SSLs) are examined instead, which provide rough estimates of the importance of each factor (Tabachnick and Fidell 1996). In table 5.5 it is clear that factor one - work development outcomes - (SSL = 3.56753) is somewhat more important in this solution than factor 2 - personal development outcomes - (SSL = 1.66676).

Finally, the internal consistency of each factor was assessed through the SMCs (see table 5.5), these values are defined as ‘high’ (Tabachnick and Fidell 1996) and indicate that the factors are well-defined by the observed variables.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>43.6%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>High (above 0.4 threshold)</td>
<td>Yes</td>
</tr>
<tr>
<td>Simple structure</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>o 42% &gt;0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o 90.91% between &gt;0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o average absolute residual 0.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o range -0.23459 to 0.15583</td>
<td></td>
</tr>
<tr>
<td>Pattern of correlations</td>
<td>Inter-Item correlations</td>
<td>Reflects pattern</td>
</tr>
<tr>
<td>Communalities</td>
<td>o Range 0.28390 to 0.58971</td>
<td>Yes - no communalities are below 0.2</td>
</tr>
<tr>
<td></td>
<td>o Majority above 0.4</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.4: Assessment of 'Valued WBL Outcomes' two-factor solution (AFA)

Table 5.5: SMCs for 'Valued WBL Outcomes'
Step Five – Final Acceptance of Factor Solution

The two-factor solution was accepted as it more fully fulfilled the specified criteria, in particular, this solution made theoretical sense and confirmed the initial PCA solution. Thus it was concluded that WBL was perceived to address two related but distinct sets of valued outcomes:

- Work development outcomes;
- Personal development outcomes.

It was not surprising that these factors were correlated as participants in the initial stage of this project indicated that items contained within these factors would be linked together in a 'Valued WBL Outcomes'. In particular, Q11 (career prospects) was linked to many factor one items, that is developing work-related skills and knowledge were linked to career development. However, it is clear from both the PCA and AFA that these items form two factors allowing distinction to be made between the relative importance of work and personal developmental outcomes to individuals. These two factors will be utilised in model testing in stage three of the project (chapter 6).

5.3 Instrumentality of WBL

The second main component to be addressed was 'Instrumentality of WBL' (indicated in figure 5.5), representing an individual's perception of how valuable or instrumental WBL was in achieving the valued outcomes discussed in the previous section. Two important categories had been identified through part one of the research:

- Employee perceptions of the instrumentality of formal learning opportunities;
- Employee perceptions of the instrumentality of informal learning opportunities.

Definitions of formal and informal learning opportunities were based on the characterisation of learning opportunities generated by participants in stage one of the study. Formal learning was defined as a structured learning opportunity leading to a specific outcome, often within a recognised time limit. Informal learning was defined as a less structured learning opportunity, taking diverse forms, frequently not having a specific outcome and often not time constrained.
Step One – Scree Test and PA

The questionnaire items (n=8) representing the ‘Instrumentality of WBL’ factor were subject to PCA to determine the underlying factor structure. Examination of the break in the slope on the Scree test and corresponding PA line (see figure 5.6) indicated that the optimum number of factors was three. However, it should be noted that the eigenvalue for factor three (1.18965) is only marginally larger than the corresponding eigenvalue for the random variables (1.146386). However, Horn’s (1965) original discussion of PA only states that eigenvalues should be larger than the corresponding random eigenvalues, regardless of the actual magnitude of the difference between them.

Figure 5.5: ‘Instrumentality of WBL’ indicated in overall model
Step Two – Initial Extraction and Assessment of Factors

Although a two-factor solution had been hypothesised a three-factor solution was suggested, therefore, the two and three factor solutions were extracted using PCA and compared.

Two-Factor Solution

When the two-factor solution was extracted using PCA the factors were found to be poorly correlated (r=0.15533) and hence orthogonal rotation (Varimax) was used. The resultant factor loadings and communalities after rotation are presented in table 5.6, all factor loadings between ±0.3 are represented as 0.
Chapter 5 – Developing Factors in WBL-Motivation Model

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q13</td>
<td>.83986</td>
<td>0</td>
<td>.74179</td>
</tr>
<tr>
<td>Q15</td>
<td>.80266</td>
<td>0</td>
<td>.66625</td>
</tr>
<tr>
<td>Q14</td>
<td>.77069</td>
<td>-.38552</td>
<td>.74260</td>
</tr>
<tr>
<td>Q16</td>
<td>.53721</td>
<td>.32580</td>
<td>.39474</td>
</tr>
<tr>
<td>Q18</td>
<td>0</td>
<td>.79969</td>
<td>.64087</td>
</tr>
<tr>
<td>Q17</td>
<td>0</td>
<td>.73300</td>
<td>.58643</td>
</tr>
<tr>
<td>Q19</td>
<td>0</td>
<td>.71780</td>
<td>.51859</td>
</tr>
<tr>
<td>Q20</td>
<td>0</td>
<td>.40708</td>
<td>.17836</td>
</tr>
</tbody>
</table>

| Factor                        | Eigenvalue | Pct Var |  | Cum Pct |
|-------------------------------|------------|---------|-------------|
| Factor 1: Instrumentality of formal learning opportunities | 2.59393    | 32.4    | 32.4        |
| Factor 2: Instrumentality of informal learning opportunities | 1.87570    | 23.4    | 55.9        |

Table 5.6: Factor loadings for 'Instrumentality of WBL’ (two-factor solution - PCA)

Importantly, this solution makes theoretical sense and supports the original factors highlighted in the focus groups, where:

- Factor one represents employee perceptions of the instrumentality of formal learning opportunities;
- Factor two represents employee perceptions of the instrumentality of informal learning opportunities.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.7.
Thus the solution met some of the criteria successfully, however, some problems were noted. In particular, the residual correlations warranted improvement and one question (Q20) had a very low communality of 0.17836 suggesting that this item was not well explained by the solution. An examination of the inter-item correlations highlighted that this item is poorly correlated with all other items other than Q16. The three-factor solution as indicated by the Scree test and PA, was extracted in order to investigate these problems further.

**Three-Factor Solution**

The three-factor solution was extracted using PCA using orthogonal (Varimax) rotation as the factors were found to be poorly correlated (table 5.8).

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>1.00000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>.06029</td>
<td>1.00000</td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>.09281</td>
<td>.21335</td>
<td>1.00000</td>
</tr>
</tbody>
</table>

Table 5.8: Correlation matrix for three-factor solution ‘Instrumentality of WBL’

The resultant factor loadings and associated communalities after rotation are presented in table 5.9; all factor loadings between ±0.3 are represented as 0.
Chapter 5 – Developing Factors in WBL-Motivation Model

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q15</td>
<td>.82013</td>
<td>0</td>
<td>0</td>
<td>.73082</td>
</tr>
<tr>
<td>Q13</td>
<td>.81683</td>
<td>0</td>
<td>0</td>
<td>.74393</td>
</tr>
<tr>
<td>Q14</td>
<td>.78998</td>
<td>-.34385</td>
<td>0</td>
<td>.74283</td>
</tr>
<tr>
<td>Q17</td>
<td>0</td>
<td>.80412</td>
<td>0</td>
<td>.63495</td>
</tr>
<tr>
<td>Q18</td>
<td>0</td>
<td>.88565</td>
<td>0</td>
<td>.69570</td>
</tr>
<tr>
<td>Q19</td>
<td>0</td>
<td>.56745</td>
<td>.42123</td>
<td>.78587</td>
</tr>
<tr>
<td>Q16</td>
<td>.41511</td>
<td>0</td>
<td>.67398</td>
<td>.54269</td>
</tr>
<tr>
<td>Q20</td>
<td>0</td>
<td>0</td>
<td>.88148</td>
<td>.78250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Pct of Var</th>
<th>Cum Pct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Instrumentality of formal learning opportunities</td>
<td>2.59393</td>
<td>32.4</td>
<td>32.4</td>
</tr>
<tr>
<td>Factor 2: Instrumentality of informal learning opportunities</td>
<td>1.87570</td>
<td>23.4</td>
<td>55.9</td>
</tr>
<tr>
<td>Factor 3: Structured versus unstructured nature of WBL</td>
<td>1.18965</td>
<td>14.9</td>
<td>70.7</td>
</tr>
</tbody>
</table>

Table 5.9: Factor loadings for ‘Instrumentality of WBL’ (three-factor solution - PCA)

Three clear factors emerge from this solution, which are theoretically sound:

- Factor one represents instrumentality of formal learning opportunities;
- Factor two represents instrumentality of informal learning opportunities;
- Factor three represents the structured versus unstructured nature of WBL.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.10.
Thus the solution met some of the criteria successfully, however, some problems were noted, in particular the percentage of residuals above 0.05 (71%) was too high, and some complex items were noted (Q19 and Q16 showing evidence of cross-loading). However, this solution helps to account for the problems in the two-factor solution described previously. Namely, that Q20 now forms a third factor with Q16, which addresses the specific characteristic of structure in relation to the value of WBL. Other items address the generic value of formal (factor one) and informal (factor two) learning opportunities reflecting the focus of this study on general perceived instrumentality of WBL rather than specific characteristics such as structure. The omission of Q16 and Q20 from further project stages is thus indicated.

Revisiting the Two-Factor Solution

The two-factor solution omitting Q16 and Q20 was extracted. The two factors were found to be poorly correlated (r=-0.07154) hence orthogonal (Varimax) rotation was used. The resultant factor loadings and associated communalities following rotation are presented in table 5.11; all factor loadings between ±0.3 are represented as 0.
Chapter 5 – Developing Factors in WBL-Motivation Model

### Developing Factors in WBL-Motivation Model

Whenever I experience formal learning I find that at least part, if not all, of it is valuable to me in some way.

Formal learning has real relevance to the knowledge and practical skills that I need to do my job.

Formal learning is valuable for gaining technical or theoretical knowledge about my job.

I feel that informal learning opportunities (e.g., everyday experiences, job swaps) are relevant to the knowledge and practical skills that I need to do my specific job.

Informal learning opportunities are valuable because they give me the chance to practice my new skills and knowledge.

Informal learning is really useful because it shows me how to do my job.

### Factor 1: Instrumentality of formal learning opportunities

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q13 Whenever I experience formal learning I find that at least part, if not all, of it is valuable to me in some way</td>
<td>.83547</td>
<td>0</td>
<td>.74008</td>
</tr>
<tr>
<td>Q14 Formal learning has real relevance to the knowledge and practical skills that I need to do my job</td>
<td>.79653</td>
<td>-.36580</td>
<td>.76827</td>
</tr>
<tr>
<td>Q15 Formal learning is valuable for gaining technical or theoretical knowledge about my job</td>
<td>.83380</td>
<td>0</td>
<td>.73804</td>
</tr>
<tr>
<td>Q17 I feel that informal learning opportunities (e.g., everyday experiences, job swaps) are relevant to the knowledge and practical skills that I need to do my specific job</td>
<td>0</td>
<td>.77989</td>
<td>.65688</td>
</tr>
<tr>
<td>Q18 Informal learning opportunities are valuable because they give me the chance to practice my new skills and knowledge</td>
<td>0</td>
<td>.86076</td>
<td>.74471</td>
</tr>
<tr>
<td>Q19 Informal learning is really useful because it shows me how to do my job</td>
<td>0</td>
<td>.68433</td>
<td>.47427</td>
</tr>
</tbody>
</table>

#### Table 5.11: Factor loadings for ‘Instrumentality of WBL’ (two-factor solution – PCA)

This solution makes theoretical sense, reflecting the same two-factor structure as previously, where:

- Factor one represents employee perceptions of the instrumentality of formal learning opportunities;
- Factor two represents employee perceptions of the instrumentality of informal learning opportunities.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.12.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>68.7%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>High (above 0.4 threshold)</td>
<td>Yes</td>
</tr>
<tr>
<td>Simple structure</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>o 66% &gt;0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o 67% are between 0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o average absolute residual 0.082635</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o range -0.23983 to 0.09876</td>
<td></td>
</tr>
<tr>
<td>Pattern of inter-item correlations</td>
<td>Reflects pattern in general</td>
<td>Yes</td>
</tr>
<tr>
<td>Communalities</td>
<td>o Range 0.76827 to 0.47427</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o All above 0.4</td>
<td></td>
</tr>
</tbody>
</table>

#### Table 5.12: Assessment of ‘Instrumentality of WBL’ solution (two-factor solution - PCA)
Thus the solution met some of the criteria successfully and seems acceptable on both theoretical and statistical grounds.

**Step 3 – Initial Acceptance of Factor Solution**

Therefore, the two-factor solution (with deletion of Q16 and Q20) was accepted as superior to the three-factor solution on all the specified criteria. The two-factors represented:

- Employee perceptions of the instrumentality of *formal* WBL;
- Employee perceptions of the instrumentality of *informal* WBL.

**Step 4 - Factor confirmation**

The two-factor solution was confirmed using AFA. Examination of the Scree Test and PA line (figure 5.7) indicates that the optimum number of factors in this data set is also two, and the two-factor solution was extracted using AFA (number of questionnaire items =6).

![Figure 5.7: Scree test and PA for 'Instrumentality of WBL' (AFA)](image)

The two factors were found to be poorly correlated ($r=0.2870$), therefore, AFA with orthogonal (Varimax) rotation was used. The resultant factor loadings and associated communalities following rotation are presented in table 5.13 below; all factor loadings between $\pm 0.3$ are represented as 0.
Chapter 5 – Developing Factors in WBL-Motivation Model

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7</td>
<td>.68859</td>
<td>0</td>
<td>0.47657</td>
</tr>
<tr>
<td>Q10</td>
<td>.67766</td>
<td>0</td>
<td>0.51832</td>
</tr>
<tr>
<td>Q34</td>
<td>.57051</td>
<td>0</td>
<td>0.96386</td>
</tr>
<tr>
<td>Q8</td>
<td>0</td>
<td>.87271</td>
<td>0.77123</td>
</tr>
<tr>
<td>Q12</td>
<td>0</td>
<td>.52271</td>
<td>0.35788</td>
</tr>
<tr>
<td>Q11</td>
<td>.35846</td>
<td>.47808</td>
<td>0.35705</td>
</tr>
</tbody>
</table>

Table 5.13: Factor loadings for ‘Instrumentality of WBL’ (two-factor solution - AFA)

Importantly, this solution makes theoretical sense and confirms the previously accepted PCA solution, where:

- Factor one represents employee perceptions of the instrumentality of formal learning opportunities;
- Factor two represents employee perceptions of the instrumentality of informal learning opportunities.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.14.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>47.4%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>High (above 0.4 threshold)</td>
<td>Yes</td>
</tr>
<tr>
<td>Simple structure</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>26% &gt;0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>100% are between 0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>average absolute residual 0.034047</td>
<td></td>
</tr>
<tr>
<td></td>
<td>range ~0.08378 to 0.09950</td>
<td></td>
</tr>
<tr>
<td>Pattern of inter-item correlations</td>
<td>Reflects pattern</td>
<td>Yes</td>
</tr>
<tr>
<td>Communalities</td>
<td>Range 0.35705 to 0.77231</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>All above 0.35</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.14: Assessment of ‘Instrumentality of WBL’ two-factor solution (AFA)
Thus the solution met the criteria successfully and seems acceptable on both theoretical and statistical grounds. As these factors were orthogonal the percentage of co-variance can be examined to establish the importance of these factors (table 5.13). The percentage of co-variance figures show that factor one (instrumentality of formal learning) accounts for a large proportion of the co-variance in the solution (Tabachnick and Fidell 1996).

The one-factor solution could not be extracted as some of the communalities exceeded 1 indicating that the number of factors being extracted is wrong (Tabachnick and Fidell 1996). This is a common problem when SMCs are used as the initial communality estimates (Nunnally and Bernstein 1994). However, examination of the pattern of inter-item correlations (appendix 9) indicates that the one-factor solution is clearly not suitable. Furthermore, the heuristics used to indicate the number of factors clearly indicate a two-factor solution, as did the PCA solution.

Finally, the internal consistency of each factor was assessed through the SMCs (see table 5.15), these values are defined as ‘high’ (Tabachnick and Fidell 1996) and indicate that the factors are well-defined by the observed variables.

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>0.72802</td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td></td>
<td>0.81183</td>
</tr>
</tbody>
</table>

Table 5.15: SMCs for ‘Instrumentality of WBL’

**Step 5 – Final Acceptance of Factor Solution**

Given these considerations the two-factor solution was accepted, that is that this component was composed of the following elements:

- Employee perceptions of the instrumentality of *formal* learning;
- Employee perceptions of the instrumentality of *informal* learning.

This factor structure allows for distinction to be made between those who value formal or informal WBL and those that value both, and will be included in the model testing stage (chapter 6).
5.4 EMPLOYEE PERCEPTIONS OF THE ORGANISATION IN RELATION TO WBL

Discussions with participants in stage one of the study revealed that the employee's perception of the organisation in relation to WBL was a key component in the WBL-motivation process (indicated in figure 5.8).

Accordingly, questions were developed to address three principal issues in relation to employee perceptions of:

- Organisational recognition of WBL outcomes valuable to employees;
- Organisational recognition of the value of WBL for addressing valued outcomes;
- Organisational commitment to WBL.

**Step 1: Scree Test and PA**

Factor analytic techniques were used to determine whether items relating to these three issues formed one general factor regarding an employee's overall perception of the organisation in relation to WBL or whether these items formed a number of factors (possibly up to three separate factors). The items (n=16) were subject to PCA to determine the underlying factor structure of this scale.
Examination of the Scree Plot and PA line indicated a maximum three-factor solution (figure 5.9), although the values of the third factor eigenvalue (1.45031) and the corresponding random variable eigenvalue (1.42831) were very close.

**Step 2 – Initial Extraction and Assessment of Factors**

In Horn's (1965) discussion of PA, the only criterion is that the eigenvalues be larger than the random eigenvalues, regardless of the magnitude of the difference between them. Thus the three-factor solution was extracted, and as factors were correlated over the suggested inter-factor correlation threshold of ±0.32 (table 5.16), Oblique (Direct Oblimin) rotation was used.

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>1.00000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.25151</td>
<td>1.00000</td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>-0.40829</td>
<td>-0.31169</td>
<td>1.00000</td>
</tr>
</tbody>
</table>

Table 5.16: Inter-factor correlations for employee perceptions of organisation (PCA)

The resultant factor loadings and associated communalities following rotation are presented in table 5.17 below, which represents the pattern matrix and 0 represents all factor loadings between ±0.3.
## Chapter 5 – Developing Factors in WBL-Motivation Model

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q50D</td>
<td>.92762</td>
<td></td>
<td>.78397</td>
<td></td>
</tr>
<tr>
<td>Q50C</td>
<td>.92077</td>
<td>0</td>
<td>0</td>
<td>.78661</td>
</tr>
<tr>
<td>Q50A</td>
<td>.79940</td>
<td>0</td>
<td>0</td>
<td>.69107</td>
</tr>
<tr>
<td>Q50B</td>
<td>.77748</td>
<td>0</td>
<td>0</td>
<td>.70968</td>
</tr>
<tr>
<td>Q50B</td>
<td>.49310</td>
<td>0</td>
<td>0</td>
<td>.63034</td>
</tr>
<tr>
<td>Q50A</td>
<td>.48317</td>
<td>0</td>
<td>-.32721</td>
<td>.66232</td>
</tr>
<tr>
<td>Q21A</td>
<td>0</td>
<td>.92685</td>
<td></td>
<td>.78566</td>
</tr>
<tr>
<td>Q22A</td>
<td>0</td>
<td>.86515</td>
<td></td>
<td>.72368</td>
</tr>
<tr>
<td>Q21B</td>
<td>0</td>
<td>.66242</td>
<td></td>
<td>.58459</td>
</tr>
<tr>
<td>Q22B</td>
<td>36078</td>
<td>-.55312</td>
<td></td>
<td>.57762</td>
</tr>
<tr>
<td>Q27B</td>
<td>0</td>
<td>-.74793</td>
<td></td>
<td>.61102</td>
</tr>
<tr>
<td>Q27A</td>
<td>0</td>
<td>-.73361</td>
<td></td>
<td>.43412</td>
</tr>
<tr>
<td>Q52A</td>
<td>.34341</td>
<td>0</td>
<td>-.63678</td>
<td>.75762</td>
</tr>
<tr>
<td>Q52B</td>
<td>0</td>
<td>-.66460</td>
<td></td>
<td>.87721</td>
</tr>
<tr>
<td>Q52C</td>
<td>.32708</td>
<td>0</td>
<td>-.68840</td>
<td>.74912</td>
</tr>
<tr>
<td>Q51</td>
<td>0</td>
<td>-.56621</td>
<td></td>
<td>.65448</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Pct of Var</th>
<th>Cum Pct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Organisational value and commitment through investment in WBL</td>
<td>7.41166</td>
<td>46.3</td>
<td>46.3</td>
</tr>
<tr>
<td>2: Organisational understanding of employee WBL needs</td>
<td>1.97483</td>
<td>12.3</td>
<td>58.6</td>
</tr>
<tr>
<td>3: Organisational overall value and commitment to WBL</td>
<td>1.43273</td>
<td>9.0</td>
<td>67.6</td>
</tr>
</tbody>
</table>

Table 5.17: Factor loadings for 'perception of organisation' (three-factor solution - PCA)
Chapter 5 – Developing Factors in WBL-Motivation Model

A clear, theoretically sound factor structure can be seen in terms of the pattern of factor loadings, where:

- Items on factor one relate to employee perceptions of organisational value and commitment to WBL through active investment in WBL.
- Items on factor two relate to employee perceptions of organisational understanding of employee WBL needs.
- Items on factor three relate to employee perceptions of the overall organisational value and commitment to WBL.

Whilst these factors reflect the issues of understanding, commitment and value indicated in stage one, it is interesting that a distinction is made in this factor structure between overall value and commitment to WBL and the value and commitment demonstrated through active investment. This might prove an important distinction in the overall model as participants in stage 1 clearly laid emphasis on the importance of ‘appropriate’ investment in WBL.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.18.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>67.6%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>High (above 0.4 threshold)</td>
<td>Yes</td>
</tr>
<tr>
<td>Simple structure</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>o 45% &gt; 0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o 81.7% are between 0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o average absolute residual 0.058139</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o range –0.24655 to 0.09595</td>
<td></td>
</tr>
<tr>
<td>Pattern of inter-item correlations</td>
<td>Reflects pattern</td>
<td>Yes</td>
</tr>
<tr>
<td>Communalities</td>
<td>o Range 0.43412 to 0.78661</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o All above 0.4</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.18: Assessment of ‘perception of organisation’ solution (three-factor solution - PCA)

Thus the solution met the criteria successfully. However, Q22B proved problematic, showing evidence of cross-loading on factors 2 and 3. Whilst this item is positively correlated to factor two to which it theoretically belongs, it also shares a high negative cross-loading on factor three. This cross-loading can be explained through examination of the inter-item correlations, which show that this item is reasonably related to the majority of items in the matrix, in particular items on factor
three. Whilst it is to be expected that perceptions that the organisation understands personal development needs be linked to perceptions of the organisational value and commitment to WBL, what is particularly interesting is that this item focused on top-level management understanding personal development outcomes. Thus the link between this item and factor three may be indicative of a more generalised perception of the relationship between top-level management understanding of employee needs in the WBL scenario.

Given the degree of relationship between the factors the one and two factor solutions were explored and compared with the three-factor solution. The following table (5.19) allows comparison of the three solutions against the assessment criteria.

<table>
<thead>
<tr>
<th>Number of Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical Sense</td>
<td>Yes in terms of an overall perception of the organisation factor, although this may be too broad</td>
<td>Yes, suggested two factors: 1: Organisational value, commitment and investment in WBL 2: Organisational understanding of WBL outcomes value to employees</td>
<td>Yes, suggested three factors: 1: Organisational value and commitment through investment in WBL 2: Organisational overall value and commitment to WBL 3: Organisational understanding of employee WBL needs</td>
</tr>
<tr>
<td>Absolute Factor Loadings</td>
<td>0.35098 to 0.84481</td>
<td>0.29659 to 0.82024</td>
<td>0.48317 to 0.92762</td>
</tr>
<tr>
<td>Simple Structure</td>
<td>N/A</td>
<td>Not clear, many cross-loadings, one item did not load well on either factor</td>
<td>Yes</td>
</tr>
<tr>
<td>Percentage of Variance</td>
<td>46.3%</td>
<td>58.7%</td>
<td>67.6%</td>
</tr>
<tr>
<td>Residuals</td>
<td>• 71% absolute residuals over 0.05  • -0.2066 to 0.49966  • 56.7% between 0.1  • Average = 0.100733</td>
<td>• 64% absolute residuals over 0.05  • -0.19871 to 0.28381  • 68.3% between 0.1  • Average = 0.078429</td>
<td>• 45% absolute residuals over 0.05  • -0.24655 to 0.09595  • 81.7% between 0.1  • Average = 0.058139</td>
</tr>
<tr>
<td>Inter-item correlation patterns</td>
<td>Not reflected</td>
<td>Reflected in part by pattern of factor loadings</td>
<td>In general reflected by pattern of factor loadings</td>
</tr>
<tr>
<td>Communalities</td>
<td>0.12319 to 0.71370</td>
<td>0.15614 to 0.68053</td>
<td>0.43412 to 0.78661</td>
</tr>
</tbody>
</table>

Table 5.19: A comparison of solutions for 'perception of organisation' (PCA)

The three-factor solution was clearly superior to the other two solutions against all criteria. In particular, the three-factor solution more accurately reflected the pattern of inter-item correlations and hence the residual statistics were within more acceptable limits. A constant concern in factor
analysis is whether to accept broad or more specific factors (Zwick and Velicer 1986, Comrey and Lee 1992). In this case it was decided that the three-factor solution was both theoretically sound and the best solution when measured against the other criteria. A one-factor solution was deemed too broad to reflect the intricacies of the individual’s perception of the organisational approach to WBL, not allowing for individuals to be distinguished on their scores across the three accepted factors. The two-factor solution did not allow for a distinction to be made between overall value and commitment and the value and commitment demonstrated through active investment in WBL, which could be a potentially important distinction. However, the links between the three factors were noted and are examined in the next section.

It remained to decide whether item 22B should be deleted from the solution. This item addresses a key issue and more importantly indicates that perceptions of top-level management may be a complicating issue in terms of identifying clear-cut factors. It was decided to retain this item and see how it performs in the next stage of factor analysis within a different cohort. Further the retention of complex but theoretically important items is supported when factors are composed of mainly pure items (Comrey and Lee 1992), as in this case.

**Step 3 – Initial Acceptance of Factor Solution**

In summary, a three-factor solution was accepted and these factors were defined as:

- Perceived organisational value and commitment through investment in WBL;
- Perceived organisational understanding of employee WBL needs;
- Perceived overall organisational value and commitment to WBL.

**Step 4 – Confirmation of Factor Solution**

AFA was used to confirm the relevance of this three-factor solution to the second cohort. Examination of the Scree Test and PA line (figure 5.10) supported a maximum three-factor solution, although it should be noted that the third factor eigenvalue (1.43798) and corresponding random variable eigenvalue (1.40495) are very similar.
The three-factor solution was, therefore, extracted and as the factors were found to be correlated (see table 5.20) oblique (Direct Oblimin) rotation was used.

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>1.00000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.35153</td>
<td>1.00000</td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>-0.47869</td>
<td>-0.30332</td>
<td>1.00000</td>
</tr>
</tbody>
</table>

Table 5.20: Factor correlation table for perception of organisation (AFA)

The resultant pattern of factor loadings and associated communalities following rotation are presented in table 5.21 below, which represents the pattern matrix and 0 represents all factor loadings between ±0.3.
Chapter 5 – Developing Factors in WBL-Motivation Model

### Table 5.21: Factor loadings for ‘perceptions of organisation’ (three-factor solution - AFA)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3D Commitment to learning/development is demonstrated by investment of time, finances and expertise in learning/development opportunities</td>
<td>0.88827</td>
<td>0</td>
<td>0</td>
<td>0.70168</td>
</tr>
<tr>
<td>Q3A Commitment to learning/development is demonstrated by top-level management actively taking part in learning</td>
<td>0.78558</td>
<td>0</td>
<td>0</td>
<td>0.62314</td>
</tr>
<tr>
<td>Q3C Commitment to learning/development is demonstrated by the organisation continually reviewing and updating learning/development opportunities</td>
<td>0.76906</td>
<td>0</td>
<td>0</td>
<td>0.61907</td>
</tr>
<tr>
<td>Q3B Commitment to learning/development is demonstrated by line management/supervisors taking part in learning</td>
<td>0.73672</td>
<td>0</td>
<td>0</td>
<td>0.66208</td>
</tr>
<tr>
<td>Q2B This organisation understands how investing in people’s learning/development can be valuable for boosting an individual’s morale</td>
<td>0.65195</td>
<td>0</td>
<td>0</td>
<td>0.57457</td>
</tr>
<tr>
<td>Q2A This organisation understands how investing in people’s learning/development can be valuable for enhancing an individual’s skills</td>
<td>0.48566</td>
<td>0</td>
<td>-0.32215</td>
<td>0.53879</td>
</tr>
<tr>
<td>Q38C Top level management are committed to offering learning and development opportunities to employees of all ages</td>
<td>0</td>
<td>0.79075</td>
<td>0</td>
<td>0.68657</td>
</tr>
<tr>
<td>Q38B Top level management are committed to offering learning and development opportunities to part-time employees of the organisation</td>
<td>0</td>
<td>0.62200</td>
<td>0</td>
<td>0.40916</td>
</tr>
<tr>
<td>Q38A Top level management are committed to offering learning and development opportunities to full-time employees of the organisation</td>
<td>0.35284</td>
<td>0.58972</td>
<td>0</td>
<td>0.61856</td>
</tr>
<tr>
<td>Q21B This organisation recognises the potential for learning and developing from formal learning opportunities (such as formal courses)</td>
<td>0.38878</td>
<td>0.41926</td>
<td>0</td>
<td>0.47817</td>
</tr>
<tr>
<td>Q21A This organisation recognises the potential for learning and developing from informal learning opportunities (such as learning from experience)</td>
<td>0</td>
<td>0.36434</td>
<td>0</td>
<td>0.42348</td>
</tr>
<tr>
<td>Q13A My personal development needs are fully understood by my line manager</td>
<td>0</td>
<td>0</td>
<td>-0.69365</td>
<td>0.48157</td>
</tr>
<tr>
<td>Q13B My personal development needs are fully understood by top-level management</td>
<td>0</td>
<td>0</td>
<td>-0.61364</td>
<td>0.58338</td>
</tr>
<tr>
<td>Q8A The practical skills and knowledge that I need to do my particular job are fully understood by my line manager</td>
<td>0</td>
<td>0</td>
<td>-0.52166</td>
<td>0.36724</td>
</tr>
<tr>
<td>Q8B The practical skills and knowledge that I need to do my particular job are fully understood by top-level management</td>
<td>0</td>
<td>0</td>
<td>-0.49857</td>
<td>0.33405</td>
</tr>
<tr>
<td>Q36 This organisation is really committed to promoting learning and development in the workplace, not just achieving targets</td>
<td>0</td>
<td>0</td>
<td>-0.31433</td>
<td>0.38332</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>SSLoadings</th>
<th>Pct of Var</th>
<th>Cum Pct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Organisational value and commitment through investment in WBL</td>
<td>6.23106</td>
<td>38.9</td>
<td>38.9</td>
</tr>
<tr>
<td>2: Organisational overall value and commitment to WBL</td>
<td>1.29216</td>
<td>8.1</td>
<td>47.0</td>
</tr>
<tr>
<td>3: Organisational understanding of employee WBL needs</td>
<td>0.96162</td>
<td>6.0</td>
<td>53.0</td>
</tr>
</tbody>
</table>

---

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A similar, theoretically sound factor structure to that accepted at the PCA stage is indicated here:

- Factor one items relating to organisational value and commitment through investment in WBL;
- Factor two items relating to organisational overall value and commitment to WBL;
- Factor three items relating to organisational understanding of employee WBL needs.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.22.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>53%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>In general high – the majority are above the 0.4 threshold</td>
<td>Yes – although some concerns</td>
</tr>
<tr>
<td>Simple structure</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>o 50% &gt;0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o 86.7% are between 0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o average absolute residual 0.056675</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o range -0.16036 to 0.17829</td>
<td></td>
</tr>
<tr>
<td>Pattern of inter-item correlations</td>
<td>Reflects pattern in general</td>
<td>Yes</td>
</tr>
<tr>
<td>Communalities</td>
<td>o Range 0.33405 to 0.70168</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o All above 0.3</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.22: Assessment of ‘perception of organisation’ three-factor solution (AFA)

This solution successfully meets the assessment criteria in general, however two problematic items were noted:

- Q21A did not achieve a loading of over 0.4 on any factor, although it did achieve a loading of 0.36434 on factor 2, which theoretically it should be assigned to.
- Q36 also did not achieve a factor loading of over 0.4 on any factor. Although it did achieve a factor loading of -0.31433 on factor three, it did not sit comfortably on this factor. Indeed, examination of this item on the structure matrix revealed that this item was almost equally related to all three factors (achieving loadings of 0.458, 0.456, -0.501 on factors one, two and three respectively), this is supported through the pattern of inter-item correlations that suggests that this item is related to the majority of items in the matrix.
Chapter 5 – Developing Factors in WBL-Motivation Model

Given the degree of inter-factor relationship, the two-factor solution was extracted as a comparison for the three-factor solution (table 5.23), as recommended by Nunnally and Bernstein (1994).

<table>
<thead>
<tr>
<th>Item</th>
<th>Commitment to learning/development is demonstrated by line management/supervisors taking part in learning</th>
<th>0.82824</th>
<th>0.66537</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3A</td>
<td>Commitment to learning/development is demonstrated by top-level management actively taking part in learning</td>
<td>0.79062</td>
<td>0.57795</td>
</tr>
<tr>
<td>Q3C</td>
<td>Commitment to learning/development is demonstrated by the organisation continually reviewing and updating learning/development opportunities</td>
<td>0.75297</td>
<td>0.57128</td>
</tr>
<tr>
<td>Q3D</td>
<td>Commitment to learning/development is demonstrated by investment of time, finances and expertise in learning/development opportunities</td>
<td>0.71459</td>
<td>0.50640</td>
</tr>
<tr>
<td>Q2B</td>
<td>This organisation understands how investing in people's learning/development can be valuable for boosting an individual's morale</td>
<td>0.66478</td>
<td>0.54772</td>
</tr>
<tr>
<td>Q2A</td>
<td>This organisation understands how investing in people's learning/development can be valuable for enhancing an individual's skills</td>
<td>0.62251</td>
<td>0.54195</td>
</tr>
<tr>
<td>Q8A</td>
<td>The practical skills and knowledge that I need to do my particular job are fully understood by my line manager</td>
<td>0.51246</td>
<td>0.23577</td>
</tr>
<tr>
<td>Q13A</td>
<td>My personal development needs are fully understood by my line manager</td>
<td>0.51246</td>
<td>0.23577</td>
</tr>
<tr>
<td>Q38C</td>
<td>Top level management are committed to offering learning and development opportunities to employees of all ages</td>
<td>0.59879</td>
<td>0.53260</td>
</tr>
<tr>
<td>Q38B</td>
<td>Top level management are committed to offering learning and development opportunities to part-time employees of the organisation</td>
<td>0.51194</td>
<td>0.49994</td>
</tr>
<tr>
<td>Q38A</td>
<td>Top level management are committed to offering learning and development opportunities to full-time employees of the organisation</td>
<td>0.30844</td>
<td>0.42631</td>
</tr>
<tr>
<td>Q13B</td>
<td>My personal development needs are fully understood by top-level management</td>
<td>0.40020</td>
<td>0.24358</td>
</tr>
<tr>
<td>Q21B</td>
<td>This organisation recognises the potential for learning and developing from formal learning opportunities (such as formal courses)</td>
<td>0.40020</td>
<td>0.24358</td>
</tr>
<tr>
<td>Q21A</td>
<td>This organisation recognises the potential for learning and developing from informal learning opportunities (such as learning from experience)</td>
<td>0.40020</td>
<td>0.24358</td>
</tr>
<tr>
<td>Q36</td>
<td>This organisation is really committed to promoting learning and development in the workplace, not just achieving targets</td>
<td>0.40020</td>
<td>0.24358</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>SS Loadings</th>
<th>Pct of Var</th>
<th>Cum Pct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: WBL value, commitment and understanding at employer-employee interface</td>
<td>6.15704</td>
<td>38.5</td>
<td>38.5</td>
</tr>
<tr>
<td>2: WBL value, commitment and understanding overall</td>
<td>1.25432</td>
<td>7.8</td>
<td>46.3</td>
</tr>
</tbody>
</table>

Table 5.23: Factor loadings for perceptions of organisation (two-factor solution AFA)
This solution suggests a reasonably clear solution, and is interesting in that it suggests a distinction between:

- The individual’s perception of organisational value, commitment and understanding of WBL at the employer-employee interface (i.e. interactions with line manager, active investment by individuals in organisation), represented by factor one, and;

- The individual’s perception of organisational value, commitment and understanding of WBL at a more generic level (i.e. the organisation’s overall approach), represented by factor two.

However, in terms of the criteria set in assessing the solutions, the two-factor solution is inferior to the three-factor solution in many respects. In particular the communalities are higher in the three-factor solution, some of the communalities in the two-factor solution are below 0.3, which is not desirable. Perhaps the most important difference between the two solutions is that the three-factor solution has been replicated in the first stage of factor analysis, whereas this two-factor solution has not been replicated. This two-factor solution may be an artefact of the sample used, where participants perceive a difference between the ‘shop floor’ interface and the overall organisation in terms of WBL. Indeed, in part one of the overall study a major difference between the three organisations in terms of perceptions of top-level management versus the shop floor interface was noted. However, the three-factor solution also addressed such issues in distinguishing between overall value and commitment, and, value and commitment demonstrated through active investment. Whilst the two-factor solution could be used as a test of the model within these two organisations, the three-factor model represents a more replicable and more generalised perspective and as such is more suitable for a generalised test of the model.

The factor analysis results for the three-factor, two-factor and one-factor solutions are presented in table (5.24) below for comparison.
Thus the three-factor solution was selected as it was superior in terms of a number of the assessment criteria. However, two problematic items had been noted in the three-factor solution. Items Q21A and Q36 were both considered for deletion. Q21A was deemed important to the study and its factor loading on factor two (0.36434) was close to the threshold of 0.4 and thus can be tolerated on this factor. However, Q36 was considered as a possible candidate for deletion as it was a generalised question regarding the organisational commitment to WBL, which might account for its being related to all three factors, and other factor two items covered this aspect adequately by focusing on the specifics of commitment. The three-factor solution was accordingly extracted omitting Q36, and as the factors were found to be correlated (table 5.25) oblique (Direct Oblimin) rotation was used.

<table>
<thead>
<tr>
<th>Number of Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes in terms of an overall perception of the organisation factor, although may be too broad</td>
<td>Yes, suggested two factors: 1: WBL Value, commitment and understanding at employer-employee interface 2: WBL Value, commitment and understanding overall</td>
<td>Yes, suggested three factors: 1: Organisational value and commitment through investment in WBL 2: Organisational overall value and commitment to WBL 3: Organisational understanding of employee WBL needs</td>
<td></td>
</tr>
<tr>
<td>Theoretical Sense</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absolute Factor Loadings</td>
<td>0.38754 to 0.73178</td>
<td>0.35724 to 0.93427</td>
<td>0.31433 to 0.88827</td>
</tr>
<tr>
<td>Simple Structure</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Percentage of Variance</td>
<td>38%</td>
<td>46.3%</td>
<td>53%</td>
</tr>
<tr>
<td>Residuals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-item correlation patterns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communalities</td>
<td>0.15019 to 0.53549</td>
<td>0.23577 to 0.69504</td>
<td>0.33405 to 0.70188</td>
</tr>
<tr>
<td>SMCs</td>
<td>Factor 1: 0.93467</td>
<td>Factor 1: 0.89932 Factor 2: 0.91402</td>
<td>Factor 1: 0.91839 Factor 2: 0.86370 Factor 3: 0.80069</td>
</tr>
</tbody>
</table>

Table 5.24: A comparison of solutions for ‘perception of organisation’ (AFA)
Chapter 5 – Developing Factors in WBL-Motivation Model

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>1.00000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.34013</td>
<td>1.00000</td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>-0.46982</td>
<td>-0.27959</td>
<td>1.00000</td>
</tr>
</tbody>
</table>

Table 5.25: Factor correlation table for perception of organisation (AFA)

The resultant pattern of factor loadings and associated communalities following rotation are presented in table 5.26 below, which represents the pattern matrix and 0 represents all loadings between ±0.3.
### Chapter 5 – Developing Factors in WBL-Motivation Model

<table>
<thead>
<tr>
<th>Item</th>
<th>Commitment to learning/development is demonstrated by investment of time, finances and expertise in learning/development opportunities</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3D</td>
<td>0.87986</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.69392</td>
</tr>
<tr>
<td>Q3C</td>
<td>0.78313</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.62209</td>
</tr>
<tr>
<td>Q3A</td>
<td>0.78088</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.61391</td>
</tr>
<tr>
<td>Q3B</td>
<td>0.73596</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.5978</td>
</tr>
<tr>
<td>Q2B</td>
<td>0.66393</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.58312</td>
</tr>
<tr>
<td>Q2A</td>
<td>0.51331</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.53030</td>
</tr>
<tr>
<td>Q38C</td>
<td>0</td>
<td>0.75254</td>
<td>0</td>
<td>0</td>
<td>0.63060</td>
</tr>
<tr>
<td>Q38B</td>
<td>0</td>
<td>0.65800</td>
<td>0</td>
<td>0</td>
<td>0.45666</td>
</tr>
<tr>
<td>Q38A</td>
<td>0.36952</td>
<td>0.57456</td>
<td>0</td>
<td>0</td>
<td>0.61253</td>
</tr>
<tr>
<td>Q21B</td>
<td>0.39840</td>
<td>0.41409</td>
<td>0</td>
<td>0</td>
<td>0.46298</td>
</tr>
<tr>
<td>Q21A</td>
<td>0</td>
<td>0.33998</td>
<td>0</td>
<td>0</td>
<td>0.39244</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>The practical skills and knowledge that I need to do my particular job are fully understood by top-level management</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q13A</td>
<td>0</td>
<td>0</td>
<td>-0.63490</td>
<td>-0.52547</td>
<td>0.42903</td>
</tr>
<tr>
<td>Q13B</td>
<td>0</td>
<td>0</td>
<td>-0.63208</td>
<td>-0.55199</td>
<td>0.62028</td>
</tr>
<tr>
<td>Q8A</td>
<td>0</td>
<td>0</td>
<td>-0.52547</td>
<td>-0.55199</td>
<td>0.39746</td>
</tr>
<tr>
<td>Q8B</td>
<td>0</td>
<td>0</td>
<td>-0.52547</td>
<td>-0.55199</td>
<td>0.37341</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>SS Loadings</th>
<th>Pct of Var</th>
<th>Cum Pct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>5.87480</td>
<td>39.2</td>
<td>39.2</td>
</tr>
<tr>
<td>2:</td>
<td>1.25510</td>
<td>8.4</td>
<td>47.5</td>
</tr>
<tr>
<td>3:</td>
<td>0.94860</td>
<td>6.3</td>
<td>53.9</td>
</tr>
</tbody>
</table>

Table 5.26: Factor loadings for perception of organisation (three-factor solution - AFA)
This solution makes theoretical sense and replicates the previous PCA and AFA solutions, where:

- Factor one represents the organisational value and commitment through investment in WBL;
- Factor two represents the organisational overall value and commitment to WBL;
- Factor three represents the organisational understanding of employee WBL needs.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.27.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>53.9%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>In general high – the majority are above the 0.4</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>threshold</td>
<td></td>
</tr>
<tr>
<td>Simple structure</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>46% &gt; 0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>88.57% are between 0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>average absolute residual 0.055949</td>
<td></td>
</tr>
<tr>
<td></td>
<td>range −0.16706 to 0.17129</td>
<td></td>
</tr>
<tr>
<td>Pattern of correlations</td>
<td>Inter-item</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Reflects pattern</td>
<td></td>
</tr>
<tr>
<td>Communalities</td>
<td>Range 0.37340 to 0.69392</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>All above 0.35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes – although some less than 0.4</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.27: Assessment of 'perception of organisation' solution (three-factor AFA)

This solution successfully meets the assessment criteria in general. Although, Q21A still does not achieve a factor loading over the threshold of 0.4, it does load onto factor two (0.33998) to which it theoretically belongs and its importance the study demands its retention.

As the factors were interrelated the proportion of variance and covariance accounted for by each factor is difficult to interpret due to the overlapping variance between factors. In such cases it is recommended that the Sum of the Squared Loadings (SSLs) be examined, which provide rough estimates of the importance of each factor (Tabachnick and Fidell 1996). From table 5.26, it can be seen that 'Organisational value and commitment through investment in WBL' (SSL = 5.87480) is more important than either 'Organisational overall value and commitment to WBL' (SSL=1.25510) or 'Organisational understanding of employee WBL needs' (SSL = 0.94860).
Finally, the internal consistencies of these scales, as assessed through the SMCs (table 5.28), are high (Tabachnick and Fidell 1996), indicating that the factors are well defined by the items.

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>0.91616</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.82833</td>
<td></td>
<td>0.79385</td>
</tr>
<tr>
<td>Factor 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.28: SMCs for perceptions of organisation

Step 5 – Final confirmation of Factor Solution

The three-factor solution was accepted at it made theoretical sense, being supported by the initial PCA solution, and met the specified criteria satisfactorily. The three factors were defined as the individual’s perception of:

- Organisational value and commitment through investment in WBL;
- Organisational overall value and commitment to WBL;
- Organisational understanding of employee WBL needs.

Whilst these three factors are, not unexpectedly, correlated, the three-factor solution allows distinction to be made between an individual’s perceptions of the organisation in terms of active investment, overall value and commitment and understanding of employee needs. Additionally, Hierarchical Multiple Regression was used to test the model in stage three, and the relationship between these factors was also explored as part of the pre-data checks. Where factors are correlated over 0.7 then they may be considered as one factor; a high correlation suggesting that they are in fact measuring the same factor.

5.5 WBL GOAL SETTING PROCESSES

This main component was designed to explore employee perceptions of the WBL goal setting process (figure 5.11).
Chapter 5 – Developing Factors in WBL-Motivation Model

Figure 5.11: WBL goal setting processes indicated in the overall model

The previous stage of the research identified the following as potentially important issues in this category:

- The need identification procedure;
- The goal setting procedure – linking needs, goals and resources;
- Interaction between employer and employee (e.g. feedback, flexibility);
- Employee understanding of organisational approach to WBL.

Step 1 – Scree Test and PA

Within this main component a possible 4 factors might be detected. The items (n=27) were subject to PCA and the number of optimum factors underlying the data was determined through examination of the Scree Plot and the use of PA (figure 5.12), which indicated a maximum of 4 factors (although the third and fourth pairs of eigenvalues are very close).
Step 2 – Initial Extraction and Assessment of Factors

The four-factor solution was extracted using PCA with oblique (Direct Oblimin) rotation as some of the factors were related above the 0.32 threshold (table 5.29).

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>1.00000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.15888</td>
<td>1.00000</td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>-0.48416</td>
<td>-0.16084</td>
<td>1.00000</td>
</tr>
<tr>
<td>Factor 4</td>
<td>0.07642</td>
<td>-0.02197</td>
<td>-0.06150</td>
</tr>
</tbody>
</table>

Table 5.29: Inter-factor correlations for WBL goal setting processes (PCA)

The resultant factor loadings and communalities following rotation are presented in the table 5.30 below, which represents the pattern matrix and communalities for each item; 0 represents all factor loadings between ±0.3.
<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Commuality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q25A In my organisation I feel that there is a systematic process for identifying my work development needs</td>
<td>0.86770</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.80244</td>
</tr>
<tr>
<td>Q25B In my organisation I feel that there is a systematic process for identifying my personal development needs</td>
<td>0.85195</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.77592</td>
</tr>
<tr>
<td>Q24A Whenever I take on new or extra duties at work my manager/supervisor discusses with me whether I need additional job-related skills or knowledge</td>
<td>0.84812</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.68122</td>
</tr>
<tr>
<td>Q24B Whenever I take on new or extra duties at work my manager/supervisor discusses with me whether I need to address any personal development issues</td>
<td>0.79835</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.68736</td>
</tr>
<tr>
<td>Q26 I feel that my learning needs are identified through a co-operative process between me and the person(s) responsible for my development</td>
<td>0.68007</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.51339</td>
</tr>
<tr>
<td>Q37B In my organisation when development needs are identified the resources that have been identified are actually made available (whether internally or externally)</td>
<td>0.67616</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.56912</td>
</tr>
<tr>
<td>Q44 If I have taken part in a learning opportunity (such as a course) the person responsible for my development discusses how I have benefited from it</td>
<td>0.59038</td>
<td>-0.36477</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.66254</td>
</tr>
<tr>
<td>Q37A In my organisation when development needs are identified the necessary learning resources to meet those needs are specifically identified (e.g. a formal course or internal mentor)</td>
<td>0.57022</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.54132</td>
</tr>
<tr>
<td>Q45 If I have taken part in a learning opportunity the person responsible for my development discusses how beneficial it could be to others in the organisation</td>
<td>0.51554</td>
<td>-0.44486</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.66261</td>
</tr>
<tr>
<td>Q43 If I have participated in learning and developmental opportunities, someone is available to help me put my new skills and knowledge into practice at work</td>
<td>0.51409</td>
<td>-0.43697</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.68432</td>
</tr>
<tr>
<td>Q47C I could explain to someone who does not work here what the organisation's practical approach to learning is</td>
<td>0.00000</td>
<td>0.85588</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.74761</td>
</tr>
<tr>
<td>Q49A I understand how the organisation's approach to learning actually benefits this organisation</td>
<td>0.00000</td>
<td>0.89895</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.67063</td>
</tr>
<tr>
<td>Q47B I could explain to someone who does not work here what the organisation's learning objectives are</td>
<td>0.00000</td>
<td>0.86444</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.65585</td>
</tr>
<tr>
<td>Q48 I understand how I can help achieve the organisation's learning objectives</td>
<td>0.00000</td>
<td>0.67188</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.55168</td>
</tr>
<tr>
<td>Q49B I understand how the organisation's approach to learning actually benefits me</td>
<td>0.00000</td>
<td>0.62134</td>
<td>-0.31141</td>
<td>0.00000</td>
<td>0.65438</td>
</tr>
<tr>
<td>Q47A I could explain to someone who does not work here what the organisation's overall objectives are</td>
<td>0.00000</td>
<td>0.62033</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.40389</td>
</tr>
<tr>
<td>Q34 My manager/supervisor encourages me to aim for challenging development and learning targets</td>
<td>0.00000</td>
<td>0.00000</td>
<td>-0.80756</td>
<td>0.00000</td>
<td>0.74937</td>
</tr>
<tr>
<td>Q42 My manager/supervisor often gives feedback about how I am developing, in addition to the formal appraisal process</td>
<td>0.00000</td>
<td>0.00000</td>
<td>-0.80282</td>
<td>0.00000</td>
<td>0.61669</td>
</tr>
<tr>
<td>Q56 My organisation tends to encourage people to experiment and try different ways of doing things to aid their learning and development</td>
<td>0.00000</td>
<td>0.00000</td>
<td>-0.65575</td>
<td>0.48542</td>
<td>0.60692</td>
</tr>
<tr>
<td>Q55 If I have a problem and/or make mistakes, it's OK because my manager/supervisor helps me to identify what went wrong and how to solve the problem</td>
<td>0.00000</td>
<td>0.00000</td>
<td>-0.64419</td>
<td>0.00000</td>
<td>0.44307</td>
</tr>
<tr>
<td>Q35 My manager/supervisor discusses with me what specific learning and development goals I need to concentrate on</td>
<td>0.39276</td>
<td>0.00000</td>
<td>-0.60510</td>
<td>0.00000</td>
<td>0.72763</td>
</tr>
<tr>
<td>Q33 In my place of work, I know who to talk to to provide me with advice about the learning and developmental opportunities open to me</td>
<td>0.00000</td>
<td>0.00000</td>
<td>-0.52026</td>
<td>0.00000</td>
<td>0.41265</td>
</tr>
<tr>
<td>Q39B This organisation makes sure that they promote a wide range of informal learning opportunities (e.g. one to one training, learning from experience)</td>
<td>0.00000</td>
<td>0.00000</td>
<td>-0.49543</td>
<td>0.00000</td>
<td>0.37388</td>
</tr>
<tr>
<td>Q39A This organisation makes sure that it promotes a wide range of formal learning opportunities (e.g. courses)</td>
<td>0.00000</td>
<td>0.00000</td>
<td>-0.37668</td>
<td>0.00000</td>
<td>0.40852</td>
</tr>
<tr>
<td>Q54 In my organisation people are encouraged to make decisions about learning and development on their own initiative without seeking 'permission'</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.80902</td>
<td>0.00000</td>
<td>0.68548</td>
</tr>
<tr>
<td>Q56 In my organisation I have a choice about whether I want to take a learning opportunity or not, nothing is forced on me</td>
<td>0.32135</td>
<td>0.00000</td>
<td>0.56345</td>
<td>0.00000</td>
<td>0.45479</td>
</tr>
<tr>
<td>Q36 This organisation tends to use a &quot;top-down, bottom-up&quot; approach to learning and development goals, that is, such goals are set according to both job-related and individual-related needs</td>
<td>0.93117</td>
<td>-0.46570</td>
<td>0.00000</td>
<td>0.52985</td>
<td>0.59368</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenv.</th>
<th>% of Var</th>
<th>Cum %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: WBL Goal Setting Procedure</td>
<td>9.67786</td>
<td>35.8</td>
<td>35.8</td>
</tr>
<tr>
<td>2: Understanding of Organisational WBL Approach</td>
<td>3.08638</td>
<td>11.4</td>
<td>47.3</td>
</tr>
<tr>
<td>3: WBL Support</td>
<td>1.76633</td>
<td>6.5</td>
<td>53.8</td>
</tr>
<tr>
<td>4: Flexibility</td>
<td>1.72630</td>
<td>6.4</td>
<td>60.2</td>
</tr>
</tbody>
</table>

Table 5.30: Factor loadings for 'WBL goal setting processes' (three-factor solution – PCA)
Four theoretically sound factors emerged, where:

- **Factor 1** represents the 'goal setting procedure' - including the need identification process, goal identification, resource allocation and discussion of benefits.

- **Factor 2** represents an individual's 'understanding of the organisational approach to WBL'.

- **Factor 3** represents 'WBL support' – which compliments the goal setting process providing emotional, guidance and practical support, focusing particularly on the line manager-employee interaction.

- **Factor 4** represents 'flexibility' given in participation in WBL.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.31.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>60.2%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>In general high – the majority are above the 0.4 threshold</td>
<td>Yes</td>
</tr>
<tr>
<td>Simple structure</td>
<td>In general yes – some complex items noted</td>
<td>Some complex items cause concern</td>
</tr>
<tr>
<td>Residuals</td>
<td>o 44% &gt;0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o 83.24% are between )0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o average absolute residual 0.056231</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o range –0.2349 to 0.4547</td>
<td></td>
</tr>
<tr>
<td>Pattern of inter-item correlations</td>
<td>Reflects pattern in general</td>
<td>Yes</td>
</tr>
<tr>
<td>Communalties</td>
<td>o Range 0.37388 to 0.80244</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o All above 0.35</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.31: Assessment of 'WBL goal setting processes' solution (three-factor solution - PCA)

This solution successfully meets the assessment criteria in general. Some problematic items were noted.

- Items Q45, Q43, Q56 and Q36 show some evidence of cross-loading. In each case the highest factor loadings assign these items to the factor to which they theoretically belong and cross-loadings are of an opposite sign. The retention of complex factors is acceptable when items are important to the study as long as the factor is mainly
Chapter 5 – Developing Factors in WBL-Motivation Model

composed of pure factor items and the naming of the factor is based on pure items (Comrey and Lee 1992).

- Item Q39A does not reach the threshold 0.4 loading on any factor, although it does attain a loading of -0.37668 on factor 3 to which it theoretically belongs. This item is important to the study and its retention is thus indicated.

The three-factor solution was investigated given the relationship between factors 1 and 3 (r=-0.48416), as advocated by Nunnally and Bernstein (1994). However, the three-factor solution did not present a clear cut solution and made less theoretical sense than the four-factor solution presented above.

**Step 3 – Initial Acceptance of Factor Solution**

Thus the four-factor solution was initially accepted:

- Factor 1 represents the ‘goal setting procedure’ - including the need identification process, goal identification, resource allocation and discussion of benefits.
- Factor 2 represents an individual’s ‘understanding of the organisational approach to WBL’.
- Factor 3 represents ‘learning support’ – which compliments the goal setting process providing emotional, guidance and practical support, focusing particularly on the line manager-employee interaction.
- Factor 4 represents ‘flexibility’ given in participation in WBL.

**Step 4 – Confirmation of Factor Solution**

The items (n=271) were subject to AFA and the number of optimum factors underlying the data were determined through examination of the Scree Plot and the use of PA (figure 5.13), which indicated a maximum of 4 factors (although the fourth pair of eigenvalues are very close).
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Figure 5.13: Scree Test and PA for WBL goal setting processes (AFA)

The four-factor solution was extracted using AFA with oblique (Direct Oblimin) rotation as there was evidence of inter-item correlation (table 5.32).

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>1.00000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.31296</td>
<td>1.00000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>0.23698</td>
<td>0.13352</td>
<td>1.00000</td>
<td></td>
</tr>
<tr>
<td>Factor 4</td>
<td>0.49488</td>
<td>0.23605</td>
<td>0.14449</td>
<td>1.00000</td>
</tr>
</tbody>
</table>

Table 5.32: Inter-factor correlation for WBL goal setting processes (AFA)

The resultant factor loadings and associated communalities following rotation are presented in the table 5.33 below, which represents the pattern matrix and communalities for each item; 0 represents all factor loadings between ±0.3.
<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Communalilty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q54 I feel that my learning needs are identified through a co-operative process between me and the person(s) responsible for my development</td>
<td>0.72885</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.593041</td>
</tr>
<tr>
<td>Q30 If I have taken part in a learning opportunity (such as a course) the person responsible for my development discusses how I have benefited from it</td>
<td>0.72578</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.51041</td>
</tr>
<tr>
<td>Q56 If I have participated in learning and developmental opportunities, someone is available to help me put my new skills and knowledge into practice at work</td>
<td>0.71774</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.60694</td>
</tr>
<tr>
<td>Q23A In my organisation I feel that there is a systematic process for identifying my work development needs</td>
<td>0.70117</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.55588</td>
</tr>
<tr>
<td>Q23B In my organisation I feel that there is a systematic process for identifying my personal development needs</td>
<td>0.66286</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.57559</td>
</tr>
<tr>
<td>Q32 If I have taken part in a learning opportunity the person responsible for my development discusses how beneficial it could be to others in the organisation</td>
<td>0.64111</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.50128</td>
</tr>
<tr>
<td>Q27B I understand how the organisation’s approach to learning actually benefits me</td>
<td>0.62223</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.45701</td>
</tr>
<tr>
<td>Q26A In my organisation when development needs are identified the necessary learning resources to meet those needs are specifically identified (e.g. a formal course or internal mentor)</td>
<td>0.55403</td>
<td>0</td>
<td>0</td>
<td>0.37169</td>
<td>0.62523</td>
</tr>
<tr>
<td>Q27A I understand how the organisation’s approach to learning actually benefits this organisation</td>
<td>0.51688</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.46437</td>
</tr>
<tr>
<td>Q14A Whenever I take on new or extra duties at work my manager / supervisor discusses with me whether I need additional job-related skills or knowledge</td>
<td>0.44881</td>
<td>0.43990</td>
<td>0</td>
<td>0</td>
<td>0.58430</td>
</tr>
<tr>
<td>Q12A This organisation makes sure that it promotes a wide range of formal learning opportunities (e.g. courses)</td>
<td>0.40628</td>
<td>0</td>
<td>0</td>
<td>0.31745</td>
<td>0.44618</td>
</tr>
<tr>
<td>Q25 I understand how I can help achieve the organisation’s learning objectives</td>
<td>0.40225</td>
<td>0.363680</td>
<td>0</td>
<td>0</td>
<td>0.42109</td>
</tr>
<tr>
<td>Q28 I could explain to someone who does not work here what the organisation’s practical approach to learning is</td>
<td>0</td>
<td>0.93885</td>
<td>0</td>
<td>0</td>
<td>0.90987</td>
</tr>
<tr>
<td>Q58 I could explain to someone who does not work here what the organisation’s learning objectives are</td>
<td>0</td>
<td>0.83598</td>
<td>0</td>
<td>0</td>
<td>0.79698</td>
</tr>
<tr>
<td>Q7 I could explain to someone who does not work here what the organisation’s overall objectives are</td>
<td>-0.30245</td>
<td>0.75251</td>
<td>0</td>
<td>0</td>
<td>0.56703</td>
</tr>
<tr>
<td>Q41 If I have a problem and/or make mistakes, it’s OK because my manager/supervisor helps me to identify what went wrong and how to solve the problem</td>
<td>0</td>
<td>0</td>
<td>0.65390</td>
<td>0</td>
<td>0.44295</td>
</tr>
<tr>
<td>Q24 My manager / supervisor discusses with me what specific learning and development goals I need to concentrate on</td>
<td>0.35421</td>
<td>0.53961</td>
<td>0</td>
<td>0</td>
<td>0.62102</td>
</tr>
<tr>
<td>Q59 In my place of work, I know who to talk to to provide me with advice about the learning and developmental opportunities open to me</td>
<td>0</td>
<td>0.52862</td>
<td>0</td>
<td>0</td>
<td>0.49359</td>
</tr>
<tr>
<td>Q45 My manager / supervisor encourages me to aim for challenging development and learning targets</td>
<td>0</td>
<td>0</td>
<td>0.51658</td>
<td>0</td>
<td>0.29569</td>
</tr>
<tr>
<td>Q33 My manager / supervisor often gives me feedback about how I am developing, in addition to the formal appraisal process</td>
<td>0</td>
<td>0.50081</td>
<td>0</td>
<td>0</td>
<td>0.37444</td>
</tr>
<tr>
<td>Q43B Whenever I take on new or extra duties at work my manager / supervisor discusses with me whether I need to address any personal development issues</td>
<td>0</td>
<td>0</td>
<td>0.38309</td>
<td>0.31295</td>
<td>0.51938</td>
</tr>
<tr>
<td>Q39 In my organisation people are encouraged to make decisions about learning and development on their own initiative without seeking ‘permission’</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.71480</td>
<td>0.47437</td>
</tr>
<tr>
<td>Q55 This organisation tends to use a ‘top-down, bottom-up’ approach to learning and development goals, that is, such goals are set according to both job-related and individual-related needs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.68018</td>
<td>0.50106</td>
</tr>
<tr>
<td>Q47 My organisation tends to encourage people to experiment and try different ways of doing things to aid their learning and development</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.51941</td>
<td>0.42351</td>
</tr>
<tr>
<td>Q26B In my organisation when development needs are identified the resources that have been identified are actually made available (whether internally or externally)</td>
<td>0.33740</td>
<td>0</td>
<td>0</td>
<td>0.48150</td>
<td>0.49959</td>
</tr>
<tr>
<td>Q30 In my organisation I have a choice about whether I want to take a learning opportunity or not, nothing is forced on me</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.47135</td>
<td>0.34917</td>
</tr>
<tr>
<td>Q12B This organisation makes sure that they promote a wide range of informal learning opportunities (e.g. one to one training, learning from experience)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.41367</td>
<td>0.40823</td>
</tr>
</tbody>
</table>

Table 5.33: Factor loadings for WBL goal setting processes (four-factor solution AFA)
Four similar theoretically sound factors were indicated by the pattern of factor loadings, where:

- **Factor 1** represents the 'goal setting procedure'.
- **Factor 2** represents an individual’s ‘understanding of the organisation’s WBL objectives’.
- **Factor 3** represents ‘WBL support’.
- **Factor 4** represents ‘flexibility’ in approach and participation in WBL.

Although, the initial four-factor PCA solution is reflected by the AFA four-factor solution, some of the items load onto different factors than previously. These differences do not change the general nature of the factors but are important to note.

- **Goal Setting Procedure** (factor 1) is expanded to include items relating to benefits gained from the WBL approach (Q27A, Q27B), how individuals can help achieve learning objectives (Q25) and the promotion of formal opportunities (Q12A). The inclusion of these items on this factor is not surprising as such elements are legitimately part of the goal setting process.

- **Understanding of Organisation's WBL Objectives** (factor 2) is more specifically defined as an individual’s understanding of the organisation's general WBL objectives and practical approach to learning, which does not include an understanding of the benefits of the organisational WBL system (those items now appear as part of factor one).

- **Flexibility** (factor 4) is expanded to include items relating to experimentation (Q47), availability of resources (Q26B) and promotion of informal opportunities (Q12B). Stage 1 results suggested a difference may be perceived between formal and informal opportunities promoted by the organisation, which is demonstrated by Q12A (formal opportunities) loading onto factor one and Q12B loading onto factor 4. This suggests, not surprisingly, that flexibility in approach is associated with promotion of informal opportunities and resource availability, whereas the promotion of formal opportunities remains linked to the more formal goal setting process.

- **Identification of personal development needs** (Q14B) now loads onto WBL Support (factor 3), linking identification of less formal needs with line management support, whereas work development needs are still linked to the formal goal setting process.
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It is likely that these issues result from the specific focus on two organisations in this AFA stage as opposed to a more general focus in the PCA stage. However, they do reflect the distinction made in stage one between formality and informality in WBL. Alongside the formal goal setting procedure itself there are also important, but less formal, mechanisms for the provision of support and flexibility in WBL approach that it is important to assess.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.34.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>52%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>In general high – the majority are above the 0.4 threshold</td>
<td>Yes</td>
</tr>
<tr>
<td>Simple structure</td>
<td>In general yes – one complex item noted</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>o 36% &gt;0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o 89.55% are between 0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o average absolute residual 0.048993</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o range –0.16669 to 0.31177</td>
<td></td>
</tr>
<tr>
<td>Pattern of inter-item</td>
<td>Reflects pattern in general</td>
<td>Yes</td>
</tr>
<tr>
<td>correlations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communalities</td>
<td>o Range 0.29569 to 0.90987</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o Majority above 0.4</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.34: Assessment of 'WBL goal setting processes' four-factor solution (AFA)

This solution successfully meets the assessment criteria in general. Two problematic items were noted:

- Q14A was a complex item, achieving similar loadings over the 0.4 threshold on factors one and three. This was deemed an important element within the study and Comrey and Lee (1992) suggest that important, complex items can be retained as long as the factor is mainly composed of pure factor items.

- Q14B did not achieve a factor loading over the 0.4 threshold on any factor, although it did achieve a factor loading close to this threshold (0.38309) on factor three. Again this was considered as an important element within the study and thus will be retained. Its loading onto factor three has been discussed above.

Considering the evidence of inter-factor correlation (table 5.32) the three-factor solution was extracted for further investigation (table 5.35).
Table 5.35: Factor loadings for ‘WBL goal setting processes’ (three-factor solution AFA)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q26A</td>
<td>0.83150</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.83409</td>
</tr>
<tr>
<td>Q27A</td>
<td>0.75832</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.47297</td>
</tr>
<tr>
<td>Q26B</td>
<td>0.69136</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.45599</td>
</tr>
<tr>
<td>Q26C</td>
<td>0.69094</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.55871</td>
</tr>
<tr>
<td>Q26D</td>
<td>0.64512</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.42529</td>
</tr>
<tr>
<td>Q23A</td>
<td>0.56536</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.43997</td>
</tr>
<tr>
<td>Q23B</td>
<td>0.56535</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.48127</td>
</tr>
<tr>
<td>Q23C</td>
<td>0.56327</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.50698</td>
</tr>
<tr>
<td>Q23D</td>
<td>0.55515</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.40807</td>
</tr>
<tr>
<td>Q24</td>
<td>0.46838</td>
<td>0.00000</td>
<td>0.32194</td>
<td>0.42299</td>
</tr>
<tr>
<td>Q39</td>
<td>0.45113</td>
<td>0.00000</td>
<td>0.28643</td>
<td></td>
</tr>
<tr>
<td>Q25</td>
<td>0.38145</td>
<td>0.39438</td>
<td>0.00000</td>
<td>0.38543</td>
</tr>
<tr>
<td>Q26</td>
<td>0.30242</td>
<td>0.54722</td>
<td>0.00000</td>
<td>0.55118</td>
</tr>
<tr>
<td>Q27</td>
<td>0.31470</td>
<td>0.51760</td>
<td>0.00000</td>
<td>0.51803</td>
</tr>
<tr>
<td>Q28</td>
<td>0.32462</td>
<td>0.39234</td>
<td>0.00000</td>
<td>0.37839</td>
</tr>
<tr>
<td>Q29</td>
<td>0.32513</td>
<td>0.34667</td>
<td>0.00000</td>
<td>0.40394</td>
</tr>
<tr>
<td>Q26</td>
<td>0.32635</td>
<td>0.36483</td>
<td>0.00000</td>
<td>0.25108</td>
</tr>
<tr>
<td>Q28</td>
<td>0.34235</td>
<td>0.75351</td>
<td>0.00000</td>
<td>0.79996</td>
</tr>
<tr>
<td>Q27</td>
<td>0.34291</td>
<td>0.62291</td>
<td>0.00000</td>
<td>0.40226</td>
</tr>
</tbody>
</table>

SS Loadings: 8.80319 % of Var: 33.0 Cum %: 33.0

1: WBL Goal Setting Procedure

2: WBL Support

3: Understanding of Organisation’s WBL Objectives
Three theoretically sound factors did emerge where:

- Factor 1 represents ‘WBL goal setting procedure’.
- Factor 2 represents ‘WBL support’ including ‘flexibility’.
- Factor 3 represents individual ‘understanding of the organisational WBL approach’.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.36.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall</td>
<td>47%</td>
<td>Yes</td>
</tr>
<tr>
<td>variance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor loadings</td>
<td>In general high – the majority are above the 0.4 threshold – three</td>
<td>The number</td>
</tr>
<tr>
<td></td>
<td>items below threshold</td>
<td>of items</td>
</tr>
<tr>
<td></td>
<td></td>
<td>under 0.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>are of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>concern</td>
</tr>
<tr>
<td>Simple structure</td>
<td>In general yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>49% &gt;0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>83.76% are between &gt;0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average absolute residual 0.060005</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Range –0.19456 to 0.32779</td>
<td></td>
</tr>
<tr>
<td>Pattern of inter-item</td>
<td>Reflects pattern in general</td>
<td>Yes</td>
</tr>
<tr>
<td>correlations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communalities</td>
<td>Range 0.25108 to 0.91012</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Majority above 0.35</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.36: Assessment of ‘WBL goal setting processes’ solution (three-factor solution - AFA)

This solution successfully meets some of the assessment criteria, although there are a few concerns particularly the low factor loadings. Thus the four-factor solution was accepted based on several factors:

- Importantly, this solution was reflected by the initial PCA solution;
- The four-factor solution allows for the assessment of flexibility in approach separately to learning support, which may be particularly important;
- This solution surpassed the three-factor solution against all criteria, in particular the higher factor loadings.

**Step 5 – Final Acceptance of Factor Solution**

The four-factor solution was accepted where:
Chapter 5 – Developing Factors in WBL-Motivation Model

- Factor 1 represents the ‘goal setting procedure’.
- Factor 2 represents an individual’s ‘understanding of the organisation's WBL objectives’.
- Factor 3 represents ‘WBL support’.
- Factor 4 represents ‘flexibility’ in approach and participation in WBL.

Finally, the internal consistencies of these scales, as assessed through the SMCs (table 5.37), are high (Tabachnick and Fidell 1996), indicating that the factors are well defined by the items.

![Table 5.37: SMCs for goal setting processes](image)

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>0.90132</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.83104</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td></td>
<td>0.89604</td>
<td></td>
</tr>
<tr>
<td>Factor 4</td>
<td></td>
<td></td>
<td>0.83679</td>
</tr>
</tbody>
</table>

5.6 OUTCOMES OF THE WBL-MOTIVATION PROCESS

This main component was designed to explore the outcomes of this WBL-motivation process by focusing on employee evaluations of the WBL process within their organisation as a result of the preceding factors (figure 5.14).

![Figure 5.14: Outcomes of the WBL-motivation process indicated in the overall model](image)
The previous stage of the research suggested that research should focus on the following:

- That the learning goals established within the organisation are acceptable to participants in terms of focus, realism and achievability.

- Participant satisfaction with the current WBL system, represented by:
  - Participant cognitive appraisal and confidence in the WBL system.
  - Participant affective responses resulting from the WBL-motivation process.

It was decided to explore whether WBL goal acceptance formed a distinct factor to the cognitive and affective outcomes of the WBL-motivation process, as WBL goal acceptance, as defined by participants, had a strong component of confidence. In particular, participants reported feeling that their efficacy in WBL was intricately linked with the perceived organisational efficacy in WBL.

**Step 1 – Scree Test and PA**

Factor analytic techniques were used to determine if this scale was composed of one general factor or up to a maximum of three separate factors. The questions (n=12) were subject to PCA and the number of optimum factors underlying the data was determined through examination of the Scree Test and PA line (figure 5.15), which indicated a maximum of two factors.

![Figure 5.15: Scree test and PA for outcomes of the WBL-motivation process (PCA)](image-url)
Step 2 – Initial Extraction and Assessment of Factors

The two-factor solution was extracted using PCA with Varimax rotation as there was no evidence of high inter-factor correlation.

The resultant factor loadings and associated communalities are presented in the table 5.38 below; 0 represents all factor loadings between ±0.3.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q71</td>
<td>0.85753</td>
<td>0</td>
<td>0.79838</td>
</tr>
<tr>
<td>Q72</td>
<td>0.83385</td>
<td>0</td>
<td>0.72953</td>
</tr>
<tr>
<td>Q65B</td>
<td>0.80270</td>
<td>0</td>
<td>0.65374</td>
</tr>
<tr>
<td>Q69</td>
<td>0.77965</td>
<td>0</td>
<td>0.61323</td>
</tr>
<tr>
<td>Q68</td>
<td>0.75652</td>
<td>0</td>
<td>0.59485</td>
</tr>
<tr>
<td>Q70</td>
<td>0.74792</td>
<td>0</td>
<td>0.57377</td>
</tr>
<tr>
<td>Q65A</td>
<td>0.73726</td>
<td>0</td>
<td>0.56679</td>
</tr>
<tr>
<td>Q74</td>
<td>0.68690</td>
<td>0</td>
<td>0.49387</td>
</tr>
<tr>
<td>Q64</td>
<td>0</td>
<td>0.70607</td>
<td>0.49881</td>
</tr>
<tr>
<td>Q63</td>
<td>0</td>
<td>0.70250</td>
<td>0.51055</td>
</tr>
<tr>
<td>Q61</td>
<td>0</td>
<td>0.68536</td>
<td>0.60998</td>
</tr>
<tr>
<td>Q62</td>
<td>0</td>
<td>0.62874</td>
<td>0.53790</td>
</tr>
</tbody>
</table>

Table 5.38: Factor loadings for outcomes of the WBL-motivation process (two-factor solution - PCA)
A clear, theoretically sound factor structure was indicated, where:

- Factor one represents employee satisfaction in the WBL system (composed of cognitive and affective components).
- Factor two represents employee acceptance of learning goals.

It is interesting to note that the affective and cognitive elements are linked together in one factor, which indicates that the cognitive and emotional elements are indeed linked together as one factor. This is consistent with previous measures of satisfaction that have treated 'satisfaction' as a dual concept composed of cognitive and emotional elements (Organ 1988).

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.39.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>59.8%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>High</td>
<td>Yes</td>
</tr>
<tr>
<td>Simple structure</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>o 71% &gt;0.05</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>o 66.66% are between 0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o average absolute residual 0.080763</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o range −0.20306 to 0.17810</td>
<td></td>
</tr>
<tr>
<td>Pattern of inter-item correlations</td>
<td>Reflects pattern in general</td>
<td>Yes</td>
</tr>
<tr>
<td>Communalities</td>
<td>o Range 0.49387 to 0.79838</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o All over 0.4</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.39: Assessment of 'outcomes of the WBL-motivation process' solution (two-factor solution - PCA)

This solution successfully meets the assessment criteria except in terms of residuals.

**Step 3 – Initial Acceptance of Factor Solution**

The two-factor solution was accepted, where:

- Factor one represents employee satisfaction in the WBL system.
- Factor two represents employee acceptance of learning goals.

**Step 4 – Confirmation of Factor Solution**
Chapter 5 – Developing Factors in WBL-Motivation Model

The questions \((n=12)\) were subject to AFA and the number of optimum factors underlying the data were determined through examination of the Scree Test and PA line (figure 5.16), which indicated a maximum two factors.

![Figure 5.16: Scree Test and PA for outcomes of the WBL-motivation process(AFA)](image)

AFA with Varimax rotation as there was no evidence of high inter-factor correlation. The resultant factor loadings are presented in table 5.40, where 0. represents all loadings between ±0.3.

A clear, theoretically sound factor structure was indicated where:

- Factor one represents employee satisfaction in the WBL system (affective and cognitive elements).
- Factor two represents employee acceptance of WBL goals.

The solution was assessed against the criteria, as detailed in chapter 3, section 3.3.5.6, and the results are presented in table 5.41.
Chapter 5 – Developing Factors in WBL-Motivation Model

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q53</td>
<td>0.74941</td>
<td>0</td>
<td>0.55148</td>
</tr>
<tr>
<td>Q46</td>
<td>0.71977</td>
<td>0</td>
<td>0.56478</td>
</tr>
<tr>
<td>Q43</td>
<td>0.69696</td>
<td>0</td>
<td>0.50453</td>
</tr>
<tr>
<td>Q40B</td>
<td>0.65460</td>
<td>0</td>
<td>0.49423</td>
</tr>
<tr>
<td>Q52</td>
<td>0.64711</td>
<td>0</td>
<td>0.41312</td>
</tr>
<tr>
<td>Q51</td>
<td>0.64249</td>
<td>0</td>
<td>0.58359</td>
</tr>
<tr>
<td>Q40A</td>
<td>0.55905</td>
<td>0</td>
<td>0.37193</td>
</tr>
<tr>
<td>Q15</td>
<td>0.53255</td>
<td>0</td>
<td>0.34152</td>
</tr>
<tr>
<td>Q37</td>
<td>0.40071</td>
<td>0</td>
<td>0.20868</td>
</tr>
<tr>
<td>Q44</td>
<td>0</td>
<td>0.74418</td>
<td>0.39573</td>
</tr>
<tr>
<td>Q49</td>
<td>0</td>
<td>0.52986</td>
<td>0.12161</td>
</tr>
<tr>
<td>Q20</td>
<td>0</td>
<td>0.50188</td>
<td>0.32459</td>
</tr>
</tbody>
</table>

Table 5.40: Factor loadings for outcomes of the WBL-motivation process (AFA)
This solution successfully meets the assessment criteria, with the exception of the communalities. Q37, Q20 and Q44 all have communalities under 0.3 suggesting that they are less well accounted for by the solution. However, the solution meets the criteria on all other counts and replicates the PCA solution indicated previously.

It is interesting to note that Q37 ('I feel I can achieve the learning goals that have been set for me within this organisation') now loads onto factor one, which relates to satisfaction in the WBL system (although this does not change the general nature of the factor). This indicates that individual achievement of goals is not unexpectedly linked to satisfaction with the supporting WBL system offered by the organisation, as stressed in the initial focus groups. Indeed, Q37 was particularly related to q51 ('I feel that this organisation makes the most out of their available learning and developmental resources'), q40b ('I feel that the system that this organisation uses to promote learning has/will be successful for achieving the organisation's development') and q46 ('The learning and developmental opportunities offered to me by this organisation make me feel really valued by the organisation'). This stresses the importance of the effect that the organisation might be having on the individual motivation process as indicated in the model.

Finally, the internal consistencies of the scales were investigated through the SMCs (table 5.42) and are within acceptable limits.
Chapter 5 – Developing Factors in WBL-Motivation Model

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>0.87210</td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.68711</td>
</tr>
</tbody>
</table>

Table 5.42: SMCs for outcomes of the WBL-motivation process

5.7 FURTHER DEVELOPMENT OF THE WBL-MOTIVATION MODEL

The original motivational framework (Locke 1991) has been invaluable in identifying and structuring the factors critical in the WBL-motivation process. Following stages one and two, the developing model can now been more specifically defined in terms of WBL-motivation. The factor analytic techniques used within this stage of the research have produced a series of distinct, well-defined factors. Most importantly, the factors that have emerged reflect those factors expected following stage one of the study. Thus, understanding of employee perspectives of the WBL-motivation process is furthered through consideration of the following:

- Two sets of valued WBL outcomes can be distinguished: work development outcomes and personal development outcomes.

- Similarly, a distinction can be made between employee perceived instrumentality of formal and informal learning opportunities.

- It is important to understand employee perceptions of the organisation in terms of organisational understanding of employee WBL needs, the organisational value and commitment to WBL demonstrated through investment and the overall organisational value and commitment to WBL.

- There are four key elements of the goal setting procedure. Not only the goal setting process itself, but also the maintenance of this process through provision of appropriate WBL support, an employee understanding the organisational WBL objectives and flexibility in approach to WBL.

- Goal acceptance formed a separate factor to the 'confidence' elements of satisfaction. However, it is important to note that expectation of individual achievement of goals
was linked to satisfaction with the WBL system. This element loaded onto satisfaction with the WBL system, which formed a single factor composed of both affective and cognitive elements.

The resultant micro model following factor analysis is represented in figure 5.17.

![Figure 5.17: Micro model of employee perspectives in the WBL-motivation process following factor analysis](image)

It is important to note that factor analytic results have been replicated in a second cohort as results can often be an artefact of the sample. Indeed, Noe and Wilk (1993) stress that the effects of a particular organisational policy on results is often a hindrance to the generalisability of those results. This is a possible explanation of the finding that, whilst results have generally been replicated in the studies reported in this chapter, some slight differences in factor loading patterns have been observed.

The relationships between these micro model factors were tested in stage three of the study, the results of which are presented in the next chapter.
CHAPTER 6

TESTING THE WBL-MOTIVATION MODEL
Testing the WBL-Motivation Model

The previous chapter discussed the development of a more clearly defined WBL-motivation model, following the factor analytic stage of the study. This model will be tested in this stage of the study, addressing objective six:

- To test the specified micro model of motivation perspectives in WBL from an employee standpoint in terms of:
  - The overall model fit of the data;
  - The significant factors within the model;
  - The relationships between the factors as defined by the model.

6.1 MODEL RE-SPECIFICATION

During pre- and post-data checks, collinearity problems (which reduces the stability of the solution by increasing the standard errors of regression coefficients and making it difficult to separate out the effect of one IV from another) were indicated for two variables – organisation understand employee WBL needs and WBL support that shared a high bi-variate correlation ($r=0.017$) - (see appendix 12). In such cases several remedies may be utilised to counteract the effects of collinearity including the construction of a composite variable, combining the two questionable variables using factor analytic techniques in cases where the two variables can be theoretically seen to be part of the same underlying concept (Berry and Feldman 1985, Hair et al 1998). This option was selected, as upon consideration it was felt theoretically possible that organisation understand employee needs could be part of a more general support factor, representing a type of ‘emotional’ support provided by the employer in the form of ‘understanding’. Consequently, factor analytic techniques were used to explore the relationship between these two variables and examine the possibility of constructing a composite score.
Using factor analytic techniques (PCA and AFA) the following scale was constructed:

<table>
<thead>
<tr>
<th>Item</th>
<th>PCA Factor Loading</th>
<th>PCA Communality</th>
<th>AFA Factor Loading</th>
<th>AFA Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q24</td>
<td>0.84007</td>
<td>0.70572</td>
<td>0.79256</td>
<td>0.62814</td>
</tr>
<tr>
<td>Q13a</td>
<td>0.74527</td>
<td>0.55542</td>
<td>0.79171</td>
<td>0.62680</td>
</tr>
<tr>
<td>Q59</td>
<td>0.59031</td>
<td>0.34846</td>
<td>0.68773</td>
<td>0.47297</td>
</tr>
<tr>
<td>Q41</td>
<td>0.57495</td>
<td>0.33057</td>
<td>0.65464</td>
<td>0.42855</td>
</tr>
<tr>
<td>Q14b</td>
<td>0.66530</td>
<td>0.44263</td>
<td>0.63478</td>
<td>0.40295</td>
</tr>
<tr>
<td>Q13b</td>
<td>0.61325</td>
<td>0.37607</td>
<td>0.63146</td>
<td>0.39875</td>
</tr>
<tr>
<td>Q33</td>
<td>0.69024</td>
<td>0.47644</td>
<td>0.59915</td>
<td>0.35898</td>
</tr>
<tr>
<td>Q8a</td>
<td>0.62221</td>
<td>0.38714</td>
<td>0.59915</td>
<td>0.31461</td>
</tr>
<tr>
<td>Q45</td>
<td>0.82951</td>
<td>0.68806</td>
<td>0.47752</td>
<td>0.22802</td>
</tr>
<tr>
<td>Q8b</td>
<td>0.57730</td>
<td>0.33327</td>
<td>0.47065</td>
<td>0.22151</td>
</tr>
</tbody>
</table>

Table 6.1: PCA and AFA factor loadings and communalities for composite WBL support factor

The solution was assessed against the criteria.
### Table 6.2: Assessment criteria for composite WBL support factor

The solution makes theoretical sense, producing a factor representing **WBL support**, including the important emotional and guidance/informational elements of support. In general this solution meets the set criteria, although some of the communalities were lower than the optimum level of 0.4. Thus this composite factor will be retained in this particular test of the model as a theoretically sound factor that is applicable to this data set and as a reasonable solution to the problem of collinearity. The use of such composite scores measuring 'social support' is supported in the literature, for example, the Inventory of Socially Supportive Behaviours (Barerra 1981) allows for the assessment of a total scale score accounting for a combination of emotional, informational and tangible support. The following diagram represents the modified model:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>PCA Details</th>
<th>AFA Details</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of overall variance</td>
<td>42.2%</td>
<td>40.8%</td>
<td>Yes</td>
</tr>
<tr>
<td>Factor loadings</td>
<td>High (above 0.4 threshold)</td>
<td>High (above 0.4 threshold)</td>
<td>Yes</td>
</tr>
<tr>
<td>Simple structure</td>
<td>N/A</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>Residuals</td>
<td>o 63% &gt;0.05</td>
<td>o 53% &gt;0.05</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>o 65.5% between 0.1</td>
<td>o 80% between 0.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o average absolute residual 0.089367</td>
<td>o average absolute residual 0.067816</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o range -0.25316 to 0.21681</td>
<td>o range -0.15211 to 0.31845</td>
<td></td>
</tr>
<tr>
<td>Pattern of inter-item correlations</td>
<td>In general</td>
<td>Reflects pattern</td>
<td>Yes</td>
</tr>
<tr>
<td>Communalities</td>
<td>o Range 0.26214 to 0.70572</td>
<td>o Range 0.22151 to 0.62814</td>
<td>Some lower than 0.35 are of concern</td>
</tr>
<tr>
<td></td>
<td>o Majority over 0.35</td>
<td>o Majority above 0.35</td>
<td></td>
</tr>
</tbody>
</table>
6.2 METHOD SUMMARY

Two organisations participated in this study; organisation 1 was a local manufacturing company employing 20 employees; organisation 2 was local leisure service provider employing 152 employees. Questionnaires were distributed using the internal mailing system. A package of measures was used to assess model factors, comprising three parts:

- A personal profile section (consisting of items relating to demographics), see appendix 2;
- The revised Attitudes and Emotions scale of the Learning Diagnostic Questionnaire (LDQ – Honey and Mumford 1990), see appendix 3;
- The 'WBL-motivation process' questionnaire, the scales of which were developed in stage two (as described in section 3.3.), see appendix 6.

Following collection of all completed questionnaires, responses were subject to data analysis. Hierarchical Regression analysis was used to identify the contribution of the Independent Variables.
(IVs) identified in the model at each stage to the prediction of satisfaction (affective and cognitive components) in the WBL system and the potential interplay between successive variable blocks. Functional ‘sets’ or ‘blocks’ that combine groups of variables measuring different facets of one stage of the model (Cohen and Cohen 1983) were entered hierarchically in the regression analysis. As recommended when using such blocks, the definition and order of variable blocks entered into the analysis were theoretically driven (Cohen and Cohen 1983, Berry and Feldman 1985, Jaccard et al 1990, Pedhazur 1982, Tabachnick and Fidell 1996, Hair et al 1998) based on the developing model. Indeed, it is proposed that the value of any model is determined as much by the underpinning logic as by the empirical demonstration through statistics (Cohen and Cohen 1983). The dependent variable (DV) was defined as the ‘individual’s satisfaction in the WBL system’. Seven independent variable blocks were entered into the analysis and are defined in table 6.3.
Chapter 6 – Testing the WBL-Motivation Model

<table>
<thead>
<tr>
<th>Block</th>
<th>Factor Name</th>
<th>Variables Included</th>
</tr>
</thead>
</table>
| 1     | Basic individual demographics                    | • Age  
       |                                                 | • Gender (female)  
       |                                                 | • Marital status (married) |
| 2     | Learning and occupational orientation            | • Academic qualifications  
       |                                                 | • SES  
       |                                                 | • Length of service  
       |                                                 | • Responsibility for the development of others  
       |                                                 | • LDQ - Attitudes & Emotions |
| 3     | Valued WBL Outcomes                              | • Perceived work development outcomes  
       |                                                 | • Perceived personal development outcomes |
| 4     | Instrumentality of WBL                           | • Perceived instrumentality of formal WBL  
       |                                                 | • Perceived instrumentality of informal WBL |
| 5     | Employee Perceptions of Organisational Value and Commitment to WBL | • Perceived organisational overall value and commitment to WBL  
       |                                                 | • Perceived organisational value and commitment to WBL through investment |
| 6     | WBL goal setting processes                       | • Goal setting procedure  
       |                                                 | • WBL support  
       |                                                 | • Flexibility  
       |                                                 | • Individuals understand organisational WBL objectives |
| 7     | WBL goal acceptance                              | • Individual WBL goal acceptance |
| DV    | Satisfaction in WBL system                       | • Satisfaction in WBL system (covering affective and cognitive elements) |

Table 6.3: Independent variable blocks and dependent variable in hierarchical multiple regression analysis

The model is thus explored using Hierarchical Multiple Regression to identify significant factors and aid understanding of the nature of inter-factor relationships. Specifically, this chapter aims to further understanding of the model through:

1. Exploration of the simple bi-variate correlations between successive variable blocks.

2. Exploration of the model through examining the relative effect of each IV block on the DV (satisfaction in WBL system) having controlled for the effects of preceding variables (based on examination of the increase in $R^2$ at each step, i.e. the unique contribution of each block to variance in satisfaction in WBL system having controlled for prior variables), identification of important IVs at each block and overall goodness of fit.

3. Identification of direct, indirect, suppressor and moderator effects at each block.
The main effects model was examined and changes in B values noted as each successive block was entered as indicators of potential indirect, suppressor and moderator effects. The results tables presented in the following sections represent the main effects model; however, where appropriate indirect, suppressor and moderator effects are highlighted and explored. A summary of the main effects plus interactions model in terms of the $R^2$ at each block is given at the end of the chapter (section 6.10).

6.3 BLOCK ONE - BASIC INDIVIDUAL DEMOGRAPHICS

Basic individual demographics (*age, female and married*) were entered into the solution first and the following statistics were calculated for the demographic IVs (table 6.4).

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>SE Beta</th>
<th>Correlation with DV</th>
<th>Semi-partial correlation</th>
<th>Partial correlation</th>
<th>sp²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.0800</td>
<td>0.5781</td>
<td>-0.0145</td>
<td>0.1049</td>
<td>-0.0163</td>
<td>-0.0142</td>
<td>-0.0144</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Female</td>
<td>-1.6700</td>
<td>1.320</td>
<td>-0.1304</td>
<td>0.1031</td>
<td>-0.1298</td>
<td>-0.1296</td>
<td>-0.1301</td>
<td>0.0169</td>
</tr>
<tr>
<td>Married</td>
<td>-1.0681</td>
<td>1.2844</td>
<td>-0.0867</td>
<td>0.1043</td>
<td>-0.0910</td>
<td>-0.0851</td>
<td>-0.0859</td>
<td>0.0074</td>
</tr>
<tr>
<td>Constant</td>
<td>25.1284**</td>
<td>2.3218</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 significant at 70.10
* significant at 70.05
** significant at 70.01

Table 6.4: Importance of IV statistics for block one

When this block of variables was entered $R=0.1583$ and both $R^2 (=0.02506, p=0.4987; R^2_{adj}=0.0064)$ and change in $R^2$ ($R^2_{inc}=0.0251, p=0.4987$) were non-significant, indicating that this block of variables did not contribute significantly to the variance in *satisfaction in WBL system*. In addition, none of the B scores for the variables were significant.

6.4 BLOCK TWO - LEARNING AND OCCUPATIONAL ORIENTATIONS

Learning and occupational orientation variables (*academic qualifications, grade, length of service, responsibility for the development of others* and existing *LDQ attitudes and emotions*) were entered into the solution next.

The following figure 6.2 demonstrates the relationship between block two and one.
Figure 6.2: Links between block two variables and block one (correlations significant <0.05), inter-block correlations are not shown

The only significant correlation between this block and the previous block was, not unexpectedly, between age and length of service ($r=0.4706$, $p<0.0001$).

The relevant statistics were calculated for the IVs and are shown in Table 6.5.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>SE Beta</th>
<th>Correlation with DV</th>
<th>Semi-partial</th>
<th>Partial correlation</th>
<th>spr*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.0495</td>
<td>0.6686</td>
<td>-0.0090</td>
<td>0.1210</td>
<td>-0.0163</td>
<td>-0.0077</td>
<td>-0.0079</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Female</td>
<td>-1.7312</td>
<td>1.3589</td>
<td>-0.1376</td>
<td>0.1082</td>
<td>-0.1298</td>
<td>-0.1340</td>
<td>-0.1369</td>
<td>0.0180</td>
</tr>
<tr>
<td>Married</td>
<td>-1.0393</td>
<td>1.3084</td>
<td>-0.0844</td>
<td>0.1063</td>
<td>-0.0910</td>
<td>-0.0821</td>
<td>-0.0844</td>
<td>0.0067</td>
</tr>
<tr>
<td>Academic</td>
<td>-0.1486</td>
<td>0.5677</td>
<td>-0.0329</td>
<td>0.1257</td>
<td>-0.0086</td>
<td>-0.0271</td>
<td>-0.0279</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Grade</td>
<td>-0.2426</td>
<td>1.0845</td>
<td>-0.0297</td>
<td>0.1327</td>
<td>-0.0308</td>
<td>-0.0231</td>
<td>-0.0238</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Years of service</td>
<td>0.0056</td>
<td>0.1164</td>
<td>0.0060</td>
<td>0.1249</td>
<td>-0.0038</td>
<td>0.0050</td>
<td>0.0051</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Responsibility for development</td>
<td>0.0400</td>
<td>1.5703</td>
<td>0.0031</td>
<td>0.1215</td>
<td>0.0400</td>
<td>0.0026</td>
<td>0.0027</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LDQ Attitudes &amp; Emotions</td>
<td>0.36131</td>
<td>0.2056</td>
<td>0.1407</td>
<td>0.1047</td>
<td>0.1754</td>
<td>0.1817</td>
<td>0.1841</td>
<td>0.033</td>
</tr>
<tr>
<td>(Constant)</td>
<td>21.8841**</td>
<td>5.2424</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 significant at 70.10
* significant at 70.05
** significant at 70.01

Table 6.5: Importance of IV statistics for block two
When this block of variables was entered $R=0.2434$ and both $R^2 (=0.05926, p=0.6968; R^2_{\text{adjusted}}=-0.0263)$ and the change in $R^2$ (0.0342, $p=0.6699$) were non-significant, indicating that this block of variables did not contribute significantly to the variance in satisfaction in WBL system. The majority of the B scores for variables were also non-significant, except:

- **LDQ Attitudes and Emotions** score (B=0.3613, $p=0.0824$, $r=0.1754$, $sp^2=0.033$)

Indicating that, not unexpectedly, existing positive LDQ attitudes and emotions to learning were associated with positive satisfaction in WBL system scores.

There were no changes of note in the B scores for block one variables when this block of variables was entered.

### 6.5 BLOCK THREE – VALUED WBL OUTCOMES

Individual perceptions of WBL valued outcomes (*work development outcomes* and *personal development outcomes*) were entered in this block.

The following diagram demonstrates the links between block three and previous blocks.

**Figure 6.3:** Links between block three variables and blocks one and two (correlations significant <0.05), inter-block correlations are not shown
This figure demonstrates that higher levels of academic qualifications are associated with more positive perceptions of valued work development outcomes from WBL, whilst increasing length of service was associated with less positive perceptions of valued work development outcomes from WBL. Higher grades are shown to be associated with more positive perceptions of valued personal development outcomes from WBL, whilst increasing age and increasing length of service are both associated with less positive perceptions of personal development outcomes.

The relationship between length of service and valued outcomes is consistent with stage one results where it was indicated that those who had been in service longer were less likely to perceive learning as valuable to them.

The following statistics were obtained when block three variables were entered (table 6.6).

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>SE Beta</th>
<th>Correlation with DV</th>
<th>Semi-partial correlation</th>
<th>Partial r</th>
<th>spr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.0245</td>
<td>0.6786</td>
<td>-0.0045</td>
<td>0.1232</td>
<td>-0.0163</td>
<td>-0.0038</td>
<td>-0.0039</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Female</td>
<td>-1.8405</td>
<td>1.3907</td>
<td>-0.1438</td>
<td>0.1086</td>
<td>-0.1298</td>
<td>-0.1382</td>
<td>-0.1413</td>
<td>0.0191</td>
</tr>
<tr>
<td>Married</td>
<td>-1.1030</td>
<td>1.3272</td>
<td>-0.0896</td>
<td>0.1078</td>
<td>-0.0910</td>
<td>-0.0868</td>
<td>-0.0893</td>
<td>0.0075</td>
</tr>
<tr>
<td>Academic</td>
<td>-0.2228</td>
<td>0.5898</td>
<td>-0.0493</td>
<td>0.1036</td>
<td>-0.0086</td>
<td>-0.0394</td>
<td>-0.0407</td>
<td>0.0016</td>
</tr>
<tr>
<td>Grade</td>
<td>-0.1553</td>
<td>1.1126</td>
<td>-0.0190</td>
<td>0.1361</td>
<td>-0.0308</td>
<td>-0.0146</td>
<td>-0.0151</td>
<td>0.0002</td>
</tr>
<tr>
<td>Years of service</td>
<td>0.0002</td>
<td>0.1207</td>
<td>0.0002</td>
<td>0.1294</td>
<td>-0.0038</td>
<td>0.0007</td>
<td>0.0007</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Responsibility for development</td>
<td>0.0247</td>
<td>1.5873</td>
<td>0.0019</td>
<td>0.1228</td>
<td>0.0400</td>
<td>0.0016</td>
<td>0.0017</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>LDQ Attitudes &amp; Emotions</td>
<td>0.3417</td>
<td>0.2104</td>
<td>0.1740</td>
<td>0.1071</td>
<td>0.1754</td>
<td>0.1696</td>
<td>0.1725</td>
<td>0.0288</td>
</tr>
<tr>
<td>Work development outcomes</td>
<td>0.1812</td>
<td>0.3343</td>
<td>0.0655</td>
<td>0.1208</td>
<td>0.0367</td>
<td>0.0566</td>
<td>0.0583</td>
<td>0.0032</td>
</tr>
<tr>
<td>Personal development outcomes</td>
<td>-0.0949</td>
<td>0.2421</td>
<td>-0.0484</td>
<td>0.1235</td>
<td>-0.0414</td>
<td>-0.0409</td>
<td>-0.0422</td>
<td>0.0017</td>
</tr>
<tr>
<td>(Constant)</td>
<td>20.3572**</td>
<td>7.5357</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* significant at 70.10
* significant at 70.05
** significant at 70.01

Table 6.6: Importance of IV statistics at block three

When this block of variables was entered R=0.2508 and both R² (p=0.06290, p=0.8283; R² adjusted= - 0.0461) and the change in R² (R² inc =0.0036, p=0.8464) were non-significant, indicating that this block of variables did not contribute significantly to the variance in satisfaction in WBL system.

The majority of the B scores for variables were also non-significant, except:
• **LDQ Attitudes and Emotions** score \( (B=0.3417, p=0.1080, r=0.1754, sp^2=0.0288) \).

There were no changes of note in the B scores for block one variables when this block of variables was entered.

### 6.6 BLOCK FOUR – INSTRUMENTALITY OF WBL

The WBL Instrumentality variables ('Instrumentality of formal WBL', 'Instrumentality of informal WBL') were entered into the solution next. The following diagram shows the relationships between block four variables and previous blocks.

![Diagram showing relationships between block four variables and previous blocks](image)

**Figure 6.4:** Links between block four variables and previous blocks (correlations significant < 0.05), inter-block correlations are not shown

This figure demonstrates that increasingly positive **LDQ attitudes and emotions** and increasingly positive perceptions of **valued work development outcomes** are associated with increasingly positive perceptions of the **instrumentality of formal WBL**. Increasingly positive perceptions of both **valued work** and **personal development outcomes** are associated with increasingly positive perceptions of the **instrumentality of informal WBL**.

The following statistics were obtained when block four variables were entered (table 6.7).
Chapter 6 – Testing the WBL-Motivation Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>SE Beta</th>
<th>Correlation with DV</th>
<th>Semi-partial correlation</th>
<th>Partial correlation</th>
<th>Spr2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.0258</td>
<td>0.6847</td>
<td>0.0047</td>
<td>0.1243</td>
<td>-0.0163</td>
<td>0.0039</td>
<td>0.0041</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Female</td>
<td>-1.8665</td>
<td>1.3920</td>
<td>-0.1458</td>
<td>0.1087</td>
<td>-0.1296</td>
<td>-0.1401</td>
<td>-0.1448</td>
<td>0.0196</td>
</tr>
<tr>
<td>Married</td>
<td>-0.9713</td>
<td>1.3411</td>
<td>-0.0799</td>
<td>0.1089</td>
<td>-0.0910</td>
<td>-0.0757</td>
<td>-0.0788</td>
<td>0.0057</td>
</tr>
<tr>
<td>Academic</td>
<td>-0.1311</td>
<td>0.5950</td>
<td>-0.0290</td>
<td>0.1317</td>
<td>-0.0086</td>
<td>-0.0230</td>
<td>-0.0240</td>
<td>0.0005</td>
</tr>
<tr>
<td>Grade</td>
<td>-0.0119</td>
<td>1.1259</td>
<td>-0.0015</td>
<td>0.1378</td>
<td>-0.0308</td>
<td>-0.0011</td>
<td>-0.0012</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Years of service</td>
<td>-0.0049</td>
<td>0.1209</td>
<td>-0.0053</td>
<td>0.1296</td>
<td>-0.0038</td>
<td>-0.0043</td>
<td>-0.0044</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Responsibility for development</td>
<td>0.2551</td>
<td>1.5989</td>
<td>0.0197</td>
<td>0.1237</td>
<td>0.0400</td>
<td>0.0167</td>
<td>0.0174</td>
<td>0.0003</td>
</tr>
<tr>
<td>LDQ Attitudes &amp; Emotions</td>
<td>0.4116</td>
<td>0.2174</td>
<td>0.2096</td>
<td>0.1107</td>
<td>0.1754</td>
<td>0.1978</td>
<td>0.2023</td>
<td>0.0391</td>
</tr>
<tr>
<td>Work development outcomes</td>
<td>0.2273</td>
<td>0.3587</td>
<td>0.0822</td>
<td>0.1297</td>
<td>0.0367</td>
<td>0.0662</td>
<td>0.0690</td>
<td>0.0044</td>
</tr>
<tr>
<td>Personal development outcomes</td>
<td>-0.0864</td>
<td>0.2472</td>
<td>-0.0441</td>
<td>0.1261</td>
<td>0.1195</td>
<td>-0.0365</td>
<td>-0.0381</td>
<td>0.0013</td>
</tr>
<tr>
<td>Instrumentality of formal learning</td>
<td>-0.5584</td>
<td>0.04088</td>
<td>-0.1633</td>
<td>0.1195</td>
<td>-0.0805</td>
<td>-0.1427</td>
<td>-0.1474</td>
<td>0.0204</td>
</tr>
<tr>
<td>Instrumentality of informal learning</td>
<td>0.1564</td>
<td>0.4017</td>
<td>0.0490</td>
<td>0.1258</td>
<td>0.0283</td>
<td>0.0407</td>
<td>0.0424</td>
<td>0.017</td>
</tr>
<tr>
<td>Constant</td>
<td>22.2956**</td>
<td>7.78796</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.7: Importance of IV statistics at block four

When this block of variables was entered into the solution R=0.2886 and both R² (=0.08327, p=0.8059; R² adjusted = -0.04769) and change in R² (R² inc=0.0204, p=0.3973) were non-significant indicating that these variables do not contribute significantly to variance in satisfaction in WBL system. The majority of the B scores for variables were also non-significant, except:

- **LDQ Attitudes and Emotions** score (B=0.4116, p=0.0618, r=0.1754, spr²=0.0391), which has become increasingly significant.

The changes in **LDQ attitudes and emotions** statistics indicate the presence of a moderating or suppressor variable, and an obvious candidate would be instrumentality of formal WBL as this shares a significant positive correlation with **LDQ attitudes and emotions**. Re-running the analysis with this variable missing confirmed that it was responsible for the change in the **LDQ attitudes and emotions** statistics. Using simple factorial ANOVA techniques the interaction between these two variables was found to be non-significant (F=1.074, p=0.365). Thus
Instrumentality of formal WBL is indicated as a suppressor variable. Suppression is further indicated as the $pr$ for LDQ attitude and emotions ($pr=0.2023$) is greater than its correlation with the satisfaction in WBL system ($r=0.1754$) - (Cohen and Cohen 1983). The following diagram demonstrates the relationship between these two variables and satisfaction in WBL system.

![Suppressor diagram]

$\beta = 0.2096$

$r = 0.2819$

$\beta = -0.1633$

Figure 6.5: Suppressor system between LDQ attitudes and emotions, instrumentality of formal WBL and DV

Positive LDQ attitudes and emotions are associated with positive perceptions of the instrumentality of formal WBL. However, positive perceptions of the Instrumentality of formal WBL are associated with less positive satisfaction in the WBL system.

6.7 BLOCK FIVE – EMPLOYEE PERCEPTIONS OF THE ORGANISATIONAL VALUE AND COMMITMENT TO WBL

The perception of the organisation in relation to WBL variables (organisational value and commitment to WBL through investment and overall organisational value and commitment to WBL) were entered next. The following diagram illustrates the relationships between this block of variables and previous blocks.
There were few correlations of note between block five variables and previous blocks, the correlations shown are significant at the 10% level, and there were no correlations significant at the 5% level. The correlations shown indicate that female groups have less positive perceptions of organisational value and commitment to WBL through investment. Furthermore, positive LDQ attitudes and emotions are associated with increasingly positive perceptions of the overall organisational value and commitment to WBL.

The following statistics were calculated upon entering the perception of the organisation in relation to WBL variables (table 6.8).
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<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>SE Beta</th>
<th>Correlation with DV</th>
<th>Semi-partial correlation</th>
<th>Partial correlation</th>
<th>spr2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.2868</td>
<td>0.5200</td>
<td>0.0521</td>
<td>0.0944</td>
<td>-0.0163</td>
<td>0.0433</td>
<td>0.0608</td>
<td>0.001</td>
</tr>
<tr>
<td>Female</td>
<td>-0.2239</td>
<td>1.0672</td>
<td>-0.0175</td>
<td>0.0834</td>
<td>-0.1298</td>
<td>-0.0165</td>
<td>-0.0232</td>
<td>0.003</td>
</tr>
<tr>
<td>Married</td>
<td>-1.3192</td>
<td>1.1015</td>
<td>-0.1071</td>
<td>0.0824</td>
<td>-0.0910-0.106</td>
<td>-0.0912</td>
<td>-0.0227</td>
<td>0.008</td>
</tr>
<tr>
<td>Academic</td>
<td>0.0562</td>
<td>0.4482</td>
<td>0.0124</td>
<td>0.992</td>
<td>-0.0086</td>
<td>0.0099</td>
<td>0.0138</td>
<td>0.000</td>
</tr>
<tr>
<td>Grade</td>
<td>0.2454</td>
<td>0.8480</td>
<td>0.0300</td>
<td>0.1038</td>
<td>-0.0308</td>
<td>0.0227</td>
<td>0.0319</td>
<td>0.000</td>
</tr>
<tr>
<td>Years of service</td>
<td>-0.0846</td>
<td>0.0915</td>
<td>-0.0907</td>
<td>0.9981</td>
<td>-0.0038</td>
<td>-0.0727</td>
<td>-0.1016</td>
<td>0.005</td>
</tr>
<tr>
<td>Responsibility for development</td>
<td>-0.1061</td>
<td>1.0204</td>
<td>-0.0082</td>
<td>0.0931</td>
<td>0.0400</td>
<td>-0.0069</td>
<td>-0.0097</td>
<td>0.000</td>
</tr>
<tr>
<td>LDQ Attitudes &amp; Emotions</td>
<td>0.2248</td>
<td>0.1664</td>
<td>0.145</td>
<td>0.0847</td>
<td>0.1754</td>
<td>0.1062</td>
<td>0.1476</td>
<td>0.011</td>
</tr>
<tr>
<td>Work development outcomes</td>
<td>0.2843</td>
<td>0.2700</td>
<td>0.1028</td>
<td>0.0976</td>
<td>0.0367</td>
<td>0.0828</td>
<td>0.1155</td>
<td>0.006</td>
</tr>
<tr>
<td>Personal development outcomes</td>
<td>-0.0925</td>
<td>0.1892</td>
<td>-0.0472</td>
<td>0.0965</td>
<td>-0.0413</td>
<td>-0.0384</td>
<td>-0.0539</td>
<td>0.001</td>
</tr>
<tr>
<td>Instrumentality of formal learning</td>
<td>-0.7272*</td>
<td>0.3083</td>
<td>-0.2126</td>
<td>0.0901</td>
<td>-0.0805</td>
<td>-0.1853</td>
<td>-0.2520</td>
<td>0.034</td>
</tr>
<tr>
<td>Instrumentality of informal learning</td>
<td>0.2034</td>
<td>0.3047</td>
<td>0.0637</td>
<td>0.0954</td>
<td>0.0283</td>
<td>0.0525</td>
<td>0.0735</td>
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<tr>
<td>Overall organisational value and commitment to WBL</td>
<td>0.6427**</td>
<td>0.1475</td>
<td>0.4380</td>
<td>0.1005</td>
<td>0.6072</td>
<td>0.3424</td>
<td>0.4336</td>
<td>0.117</td>
</tr>
<tr>
<td>Organisational value and commitment to WBL through investment</td>
<td>0.3117**</td>
<td>0.0979</td>
<td>0.3173</td>
<td>0.0997</td>
<td>0.5447</td>
<td>0.2501</td>
<td>0.3315</td>
<td>0.042</td>
</tr>
<tr>
<td>Constant</td>
<td>8.8085</td>
<td>6.1719</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

1 significant at .010
* significant at .0105
** significant at .001

*Table 6.8: Importance of IV statistics at block five*

When this block of variables was entered into the solution R=0.7026 and both R² (=0.49365, p<0.0001; R² adjusted=0.4072) and change in R² (R² inc=0.4104, p<0.0001) were significant indicating that this block of variables account for an additional 41.04% variance in satisfaction in WBL system. B scores for variables entered in this block that are significant are:
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- **Value and commitment to WBL through investment** (B=0.3117, p=0.0021; \( r_{x,DV} = 0.5447, sp^{2}=0.0421 \)).

- **Overall organisational value and commitment to WBL** (B=0.6427, p=0.0000, \( r_{x,DV} = 0.6072, sp^{2}=0.1172 \)).

Both variables share a positive relationship with *satisfaction in WBL system*, indicating that increasingly positive perceptions of the organisation in relation to WBL, as predicted, are associated with increasingly positive *satisfaction in WBL system*.

There are two changes worthy of attention in the statistics for variables entered prior to this block:

- **LDQ attitudes and emotions** is no longer significant (B=0.2248, p=0.1804, \( r_{x,DV} = 0.1754, sp^{2}=0.0113 \)).

- **Instrumentality of formal WBL** has become significant (B= -7272, p=0.0207, \( r_{x,DV} = -0.0805, sp^{2}=0.0343 \)).

The change in the relationship between *LDQ attitudes and emotions* and *satisfaction in WBL system* indicates the presence of a test variable or an interaction effect. Re-running the analysis indicates that *overall organisational value and commitment to WBL* is the variable responsible for the observed effect on LDQ attitudes and emotions. Indeed, these two variables share a significant correlation (r=0.1788, p=0.081). Using simple factorial ANOVA techniques the interaction effect between these two variables was found to be non-significant (F=1.602, p=0.195).

Given that the significance of *LDQ attitudes and emotions* was reduced, *overall organisational value and commitment to WBL* may be acting as a test variable. Indeed, this was indicated as significant differences were found between low, medium and high *LDQ attitudes and emotions* groups in terms of perceived *overall organisational value and commitment to WBL* (Kruskal-Wallis=7.9661, p=0.0186; mean LDQ<sub>low</sub>=11.7500, mean LDQ<sub>medium</sub>=13.7097 and mean LDQ<sub>high</sub>=15.1429). The following diagram demonstrates the relationship between these two variables and *satisfaction in WBL system*. 

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This indicates that those who have more positive LDQ attitudes and emotions to learning perceive more positive overall organisational value and commitment to WBL and hence are more satisfied in the WBL system.

The change in the relationship between instrumentality of formal learning and satisfaction in WBL system indicates the presence of an interaction effect or a suppressor variable. Re-running the analysis indicated that overall organisational value and commitment to WBL was also responsible for the change in this variable. Using simple factorial ANOVA techniques, the interaction effect between these two variables was found to be significant (F=3.127, p=0.019). The following figure illustrates the nature of this interaction.

This figure clearly shows that for those individuals who have low perceived instrumentality of formal learning, their perception of high overall organisational value and commitment to WBL has little effect on overall satisfaction in WBL system. However, for those with a high perceived
instrumentality of formal learning, their perception of overall organisational value and commitment to WBL does have a positive effect on overall satisfaction in WBL system.

When this interaction term was tested using HMR, it was found to be significant (B=1.2408, p=0.0345, $r_{adj}=0.2749$), accounting for an additional significant 2.734% variance in satisfaction in WBL system ($R=0.72179$, $R^2=0.52099$, $R^2_{adj}=0.432228$; $R^2_{inc}=0.02734$, $F=4.6231$, $p=0.0345$). Thus this interaction will be included in the final model summary at the end of the chapter (section 6.10).

It is also worth noting the changes in the statistics for female, which, although not quite significant in this particular test of the model, may be indicative of changes to be found in future tests. At stage four female had a B= -1.8665 (p=0.1836), however during this stage this B was reduced to B=-0.2239 (p=0.9999). The change in the relationship between female and the satisfaction in WBL system indicates the presence of a test variable or an interaction effect. Re-running the analysis indicates that organisational value and commitment to WBL through investment is the variable responsible for the observed effect on female. Indeed, these two variables share a bivariate correlation of $r=-0.1815$ (p=0.080). Using simple factorial ANOVA techniques the interaction effect between these two variables was found to be non-significant ($F=1.036$, $p=0.356$). Given that the B of female was reduced, organisational value and commitment to WBL through investment may be acting as a test variable. Indeed, this was indicated as significant differences were found between male and female groups in terms of perceived organisational value and commitment to WBL through investment ($F=3.1329$; $p=0.080$, male mean =18.6610, female mean =16.3143), indicating that male groups have more positive perceptions of organisational value and commitment to WBL through investment. The following diagram demonstrates the relationship between these two variables and the satisfaction in WBL system.

![Figure 6.9: Indirect relationship between female and DV](image-url)
6.8 BLOCK SIX — WBL GOAL SETTING PROCESSES

The goal setting block was composed of four variables, goal setting process, WBL support, flexibility and understanding of organisational WBL objectives. The following diagram shows the relationships between this block of variables and previous blocks.

This diagram indicates that female shares a negative association with flexible, indicating that female groups are less positive about the flexible element within the organisational WBL system. Whereas positive perceptions of overall organisational value and commitment to WBL and value and commitment to WBL through investment are both associated with more positive perceptions of flexible. Higher levels of academic qualifications are associated with less positive perceptions of the goal setting procedure. Whereas positive perceptions of overall organisational value and commitment to WBL and value and commitment to WBL through investment are both associated with more positive perceptions of goal setting. Increasing length of service is associated with more positive perceptions of the understanding of organisational WBL objectives, as are positive perceptions of overall organisational value and commitment to WBL and value and commitment to WBL through investment. Finally, positive perceptions of overall organisational value and commitment to WBL and value and
commitment to WBL through investment are associated with increasingly positive perceptions of WBL support.

The following statistics were obtained upon entry of these variables into the solution (table 6.9).
When this block of variables was entered into the solution $R=0.81870$ and both $R^2 (=0.67028$, $p<0.0001; R^2_{\text{adj}}=0.59419)$ and change in $R^2 (R^2_{\text{change}}=0.1766, p<0.0001)$ were significant indicating that these variables contribute an additional 17.66% variance in satisfaction in WBL system. B scores for variables entered in this block that are significant are:

- **Flexible** ($B=0.4820, p=0.0029, r_{s,DV}= 0.6325, \text{spr}^2=0.0399)$

Table 6.9: Importance of IV statistics for block six

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>SE Beta</th>
<th>Correlation with DV</th>
<th>Semi-partial correlation</th>
<th>Partial correlation</th>
<th>spr2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.07661</td>
<td>0.4517</td>
<td>0.0139</td>
<td>0.0820</td>
<td>-0.0163</td>
<td>0.0110</td>
<td>0.0132</td>
<td>0.0001</td>
</tr>
<tr>
<td>Female</td>
<td>0.1330</td>
<td>0.8955</td>
<td>0.0104</td>
<td>0.0700</td>
<td>-0.1298</td>
<td>0.0097</td>
<td>0.0168</td>
<td>0.0001</td>
</tr>
<tr>
<td>Married</td>
<td>-0.1854</td>
<td>0.8621</td>
<td>-0.0151</td>
<td>0.0700</td>
<td>-0.0910-0.106</td>
<td>-0.0140</td>
<td>-0.0243</td>
<td>0.0002</td>
</tr>
<tr>
<td>Academic</td>
<td>0.3683</td>
<td>0.3777</td>
<td>0.0815</td>
<td>0.0836</td>
<td>-0.0086</td>
<td>0.0634</td>
<td>0.1098</td>
<td>0.0040</td>
</tr>
<tr>
<td>Grade</td>
<td>0.3655</td>
<td>0.7179</td>
<td>0.0447</td>
<td>0.0878</td>
<td>-0.0308</td>
<td>0.0331</td>
<td>0.0576</td>
<td>0.0011</td>
</tr>
<tr>
<td>Years of service</td>
<td>-0.0890</td>
<td>0.0783</td>
<td>-0.0955</td>
<td>0.0840</td>
<td>-0.0038</td>
<td>-0.0739</td>
<td>-0.1276</td>
<td>0.0055</td>
</tr>
<tr>
<td>Responsibility for development</td>
<td>-0.1264</td>
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<td>-0.0098</td>
<td>0.0792</td>
<td>0.0040</td>
<td>-0.0080</td>
<td>-0.0140</td>
<td>-0.0243</td>
</tr>
<tr>
<td>LDQ Attitudes &amp; Emotions</td>
<td>0.1801</td>
<td>0.1388</td>
<td>0.0917</td>
<td>0.0707</td>
<td>0.1754</td>
<td>0.0843</td>
<td>0.1453</td>
<td>0.0071</td>
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<tr>
<td>Work development outcomes</td>
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<td>0.1135</td>
<td>0.0609</td>
<td>0.0367</td>
<td>0.0912</td>
<td>0.1568</td>
<td>0.0083</td>
</tr>
<tr>
<td>Personal development outcomes</td>
<td>-0.1507</td>
<td>0.1577</td>
<td>-0.0769</td>
<td>0.0805</td>
<td>-0.0413</td>
<td>-0.0621</td>
<td>-0.1076</td>
<td>0.0039</td>
</tr>
<tr>
<td>Instrumentality of formal learning</td>
<td>-0.9018**</td>
<td>0.2590</td>
<td>-0.2367</td>
<td>0.0757</td>
<td>-0.0805</td>
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<td>-0.3668</td>
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</tr>
<tr>
<td>Instrumentality of informal learning</td>
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<td>0.2595</td>
<td>0.1354</td>
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<td>0.0283</td>
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<td>0.1853</td>
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<tr>
<td>Overall organisational value and commitment to WBL</td>
<td>0.1304</td>
<td>0.1511</td>
<td>0.0889</td>
<td>0.1030</td>
<td>0.5072</td>
<td>0.0561</td>
<td>0.0972</td>
<td>0.0031</td>
</tr>
<tr>
<td>Organisational value and commitment to WBL through investment</td>
<td>0.1399*</td>
<td>0.0865</td>
<td>0.1424</td>
<td>0.0880</td>
<td>0.5447</td>
<td>0.1052</td>
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<tr>
<td>WBL Support</td>
<td>0.1406*</td>
<td>0.0812</td>
<td>0.1537</td>
<td>0.0888</td>
<td>0.5964</td>
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</tr>
<tr>
<td>Goal Setting</td>
<td>0.2184*</td>
<td>0.0942</td>
<td>0.2647</td>
<td>0.1141</td>
<td>0.6695</td>
<td>0.1508</td>
<td>0.2540</td>
<td>0.0227</td>
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<td>Flexible</td>
<td>0.4820**</td>
<td>0.1569</td>
<td>0.2977</td>
<td>0.0969</td>
<td>0.6325</td>
<td>0.1998</td>
<td>0.3286</td>
<td>0.0399</td>
</tr>
<tr>
<td>Understand Organisational WBL Objectives</td>
<td>0.6694</td>
<td>0.4371</td>
<td>0.1162</td>
<td>0.0759</td>
<td>0.3050</td>
<td>0.0996</td>
<td>0.1709</td>
<td>0.0099</td>
</tr>
<tr>
<td>Constant</td>
<td>0.2886</td>
<td>5.2932</td>
<td>0.0139</td>
<td>0.0820</td>
<td>-0.0163</td>
<td>0.0110</td>
<td>0.0132</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

1 significant at 70.10
* significant at 70.05
** significant at 70.01
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- **Goal Setting** (B=0.2184, p=0.0230, \( r_{X, DV} = 0.6695 \), \( sp^2=0.0227 \))

Both variables share a positive relationship with *satisfaction in WBL system*, indicating that increasingly positive perceptions of goal setting variables, as predicted, are associated with increasingly positive *satisfaction in WBL system*.

The other two variables entered at this block were approaching significance but did not achieve the 5% significance threshold:

- **WBL Support** (B=0.1406, p=0.0875; \( r_{X, DV} = 0.5964 \), \( sp^2=0.0127 \))
- **Understand Organisational WBL Objectives** (B=0.6694, p=0.1297, \( r_{X, DV} = 0.3050 \), \( sp^2=0.0099 \))

It should be noted that in the factor analysis chapter the items on the original *understand organisational approach to WBL* were divided into a separate *understand organisational objectives to WBL factor* and the remaining items loaded onto and were retained on the *goal setting* factor. Thus, whilst *understand organisational WBL objectives* has not reached the required level of significance aspects of *understand organisational approach to WBL* are significant in the *goal setting* factor. These items relate directly to the perceived understanding of benefits related to organisational approach to WBL and how the individual can help to achieve organisational objectives.

There are four changes worthy of attention in the statistics for variables entered prior to this block:

- **Work development outcomes** had become increasingly significant (block four \( B=0.2273 \), \( p=0.5281 \)) at both block five (B=0.2843, \( p=0.2954 \)) and block six (B=0.3140, \( p=0.1647 \)).
- **Instrumentality of formal learning** has become increasingly significant (B= -0.9018, \( p=0.0008 \)).
- **Instrumentality of informal learning** is significant at the 10% level (B=0.4323, \( p=0.0998 \)).
- **Overall organisational value and commitment to WBL** has become non-significant (B=0.1304, \( p=0.3909 \)).
- **Organisational value and commitment to WBL through investment** has decreased in significance (B=0.1399, p=0.1098).

It was noted that **work development outcomes** had become increasingly significant (block four B=0.2273, p=0.5281) at both block five (B=0.2843, p=0.2954) and block six (B=0.3140, p=0.1647). This effect seemed to be due to interactions found using simple factorial ANOVA techniques between **work development outcomes** and:

- **Overall organisational value and commitment to WBL** (F=2.166, p=0.080), which was not significant when entered into the HMR (R^2_inc=0.01037, F=2.5005, p=0.1150).

- **WBL support** (F=3.122, p=0.030), which was not significant when entered into the HMR (R^2_inc=0.00285, F=0.67367, p=0.4143).

It was noted that there was some interaction between these two-way interactions, which led to investigation of a potential three-way interaction between **work development outcomes, overall organisational value and commitment to WBL** and **WBL support**. Using HMR this interaction was found to be significant (R=0.83931, R^2=0.70443; R^2_inc=0.02306, p=0.0172). It should be noted that, for completeness, this three-way interaction was initially also tested in the presence of the full two-way model involving these three variables as recommended by Jaccard et al (1990). As sample size restricts the exploration of this interaction through trichotomisation of variables, the following diagrams (figures 6.11 and 6.12) illustrate this three-way interaction by dichotomising variables using a median split approach.

![Figure 6.11: Three-way interaction between work development outcomes, overall organisational WBL value and commitment and WBL support – low support condition](image-url)
In the condition of high perceived WBL support and high perceived overall value and commitment to WBL, those with high work-development outcomes were more satisfied with the WBL system.

Thus when the full interaction model was tested, including all significant interactions this interaction accounted for 2.306% variance in satisfaction in WBL system, where $B=1.1246$ (std error$=0.4618$).

The change in *instrumentality of formal learning* indicates the presence of a suppressor or moderator variable. Exploration of the inter-factor relationships and use of simple factorial ANOVA revealed two potentially significant interactions between *instrumentality of formal learning* and *goal setting* ($F=5.585$, $p<0.0001$, $r=0.0548$) and *WBL support* ($F=1.607$, $p=0.180$). However, when these interactions were tested using HMR both were found to be non-significant ($R^2_{inc}=0.00372$, $F=0.91124$, $p=0.3429$; $R^2_{inc}=0.00907$, $F=2.2278$, $p=0.1397$, respectively). Upon further investigation a three-way interaction between instrumentality of formal learning, goal setting and WBL support was indicated and found to be significant when tested using HMR ($R=0.86296$, $p<0.0001$; $R^2=0.74469$, $R^2_{adjusted}=0.67321$; $R^2_{inc}=0.04026$, $p=0.0010$). It should be noted that, for completeness, this three-way interaction was initially also tested in the presence of the full two-way interaction model involving the three variables (as recommended by Jaccard et al 1990). As sample size restricts the exploration of this interaction through trichotomisation of variables, the following diagrams (figures 6.13 and 6.14) illustrate this three-way interaction by dichotomising variables using a median split approach.
Thus this interaction accounts for 4.026% of the variance in *satisfaction in WBL system* (in the presence of all significant interactions), where $B=1.3979$ (std error=0.04065). When *WBL support* is perceived to be high and perceptions of *goal setting* are positive (high), then those with more positive perceptions of the *instrumentality of formal learning* are more satisfied with the WBL system.

The increase in the significance of *instrumentality of informal learning* indicates the presence of a suppressor or moderator variable. Using simple factorial ANOVA techniques, no significant interactions were found between *instrumentality of informal learning* and *goal setting* ($F=0.303$, $p=0.875$), *flexible* ($F=0.925$, $p=0.454$), *understand organisational WBL objectives* ($F=0.443$, $p=0.777$) or *WBL support* ($F=0.861$, $p=0.465$). A suppressor effect is indicated, firstly, as the pr for *instrumentality of informal learning* is greater than its correlation with the DV
(pr=0.1853, r=0.0283), secondly as instrumentality of informal learning is related to flexible (r= -0.1491, p=0.147) and, thirdly, re-running the analysis indicates that flexible is responsible for changes in this variable. Although this suppressor effect is based on a weak correlation it does indicate potential effects to be found in future analyses. The following diagram illustrates the relationship between these variables.

**Figure 6.15: Suppressor system between informal WBL instrumentality, flexible and DV**

Thus positive perceptions of the instrumentality of informal learning are associated with positive perceptions of satisfaction in WBL system. However, positive perceptions of the instrumentality of informal WBL are also associated with less positive perceptions of flexibility in the organisational WBL system.

The changes in organisational value and commitment to WBL through investment indicate the presence of moderator or test variables. Using simple factorial ANOVA techniques no significant interactions were found between organisational value and commitment to WBL through investment and flexible (F=0.559, p=0.693), goal setting (F=0.978, p=0.380), WBL support (F=0.900, p=0.468) or understand organisational approach to WBL (F=0.437, p=0.727). However, flexible, goal setting and WBL support were indicated as test variables intervening between organisational value and commitment to WBL through investment and satisfaction in WBL system, as indicated by the model. Using one-way ANOVAs significant differences were found between low, medium and high organisational value and commitment to WBL through investment groups on levels of:
• **Flexible** \((F=11.5891, \ p<0.0001, \ \text{mean low}=10.6857, \ \text{mean medium}=13.7391, \ \text{mean high}=15.0667)\). Scheffé's test indicated that there were significant differences between groups one and two, and groups one and three.

• **Goal setting** \((F=24.6910, \ p<0.0001, \ \text{mean low}=20.6571, \ \text{mean medium}=29.5435, \ \text{mean high}=30.2667)\). Scheffé's test indicated that there were significant differences between groups one and two, and groups one and three.

• **WBL support** \((F=8.0617, \ p=0.0006, \ \text{mean low}=22.3429, \ \text{mean medium}=27.3913, \ \text{mean high}=28.5714)\). Scheffé's test indicated that there were significant differences between groups one and two, and groups one and three.

The following diagram illustrates the relationship between these variables.

![Diagram](image)

**Figure 6.16:** Indirect relationship between organisational value and commitment to WBL through investment and DV

Thus as expected, goal setting variables (**flexible**, **goal setting** and **WBL support**) intervene in the relationship between **organisational value and commitment to WBL through investment** and **satisfaction in WBL system**.

The changes in **overall organisational value and commitment to WBL** are indicative of the presence of a moderator or intervening variable. Using simple factorial ANOVA techniques, no significant interactions were found between overall **organisational value and commitment to WBL** and **goal setting** \((F=1.395, \ p=0.250)\), **flexible** \((F=0.559, \ p=0.693)\) or **understand**
organisational approach to WBL (F=1.582, p=0.2000). Using one-way ANOVAs significant differences were found between low, medium and high overall organisational value and commitment to WBL groups on levels of:

- **Goal setting** (F=37.7875, p<0.0001, mean low=16.1250, mean medium=27.3710, mean high=32.2778), Scheffé's test indicated that there were significant differences between all three groups.

- **Flexible** (F=19.1299, p<0.0001, mean low=8.9375, mean medium=12.9839, mean high=15.7778), Scheffé's test indicated that there were significant differences between all three groups.

Given these results and the significant correlations between overall organisational value and commitment to WBL and both goal setting (r=0.6696) and flexible (r=0.6079) indicates that these variables act as test variables, intervening between perceptions of overall organisational value and commitment and satisfaction in WBL system.

![Figure 6.17: Indirect relationship between overall organisational value and commitment to WBL and DV](image)

However a significant interaction was found using simple factorial ANOVA techniques between overall organisational value and commitment to WBL and WBL support (F=2.954, p=0.025). When this interaction was included in the HMR the interaction was not found to be significant ($R^2_{inc}=0.00552$, F=1.1311, p=0.2558).
6.9 BLOCK SEVEN - WBL GOAL ACCEPTANCE

The last block to be entered contained the *goal acceptance* variable. The diagram below demonstrates the relationships between this variable and previous variables.

![Diagram showing relationships between variables](image)

*Figure 6.18: Link between block seven variable and previous blocks (correlations significant <0.05), inter-block correlations not shown*

This diagram illustrates that *understand organisational WBL objectives, instrumentality of formal learning, work development outcomes* and *LDQ attitude and emotions* are all positively associated with goal acceptance.

The following statistics were calculated (table 6.10):
### Table 6.10: Importance of IV statistics for block seven

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>SE Beta</th>
<th>Correlation with DV</th>
<th>Semi-partial correlation</th>
<th>Partial correlation</th>
<th>spr2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.1976</td>
<td>0.4482</td>
<td>0.0359</td>
<td>0.0614</td>
<td>-0.0163</td>
<td>0.0282</td>
<td>0.0502</td>
<td>0.0008</td>
</tr>
<tr>
<td>Female</td>
<td>0.0293</td>
<td>0.8816</td>
<td>0.0023</td>
<td>0.0689</td>
<td>-0.1298</td>
<td>0.0021</td>
<td>0.0038</td>
<td>0.0000</td>
</tr>
<tr>
<td>Married</td>
<td>-0.1683</td>
<td>0.8473</td>
<td>-0.0137</td>
<td>0.0688</td>
<td>-0.0910</td>
<td>-0.0127</td>
<td>-0.0226</td>
<td>0.0002</td>
</tr>
<tr>
<td>Academic</td>
<td>0.4502</td>
<td>0.3735</td>
<td>0.0997</td>
<td>0.0827</td>
<td>-0.0086</td>
<td>0.0770</td>
<td>0.1361</td>
<td>0.0059</td>
</tr>
<tr>
<td>Grade</td>
<td>0.3336</td>
<td>0.7056</td>
<td>0.0408</td>
<td>0.0863</td>
<td>-0.0308</td>
<td>0.0302</td>
<td>0.0538</td>
<td>0.0009</td>
</tr>
<tr>
<td>Years of service</td>
<td>-0.0807</td>
<td>0.0771</td>
<td>-0.0865</td>
<td>0.0827</td>
<td>-0.0038</td>
<td>-0.0668</td>
<td>-0.1184</td>
<td>0.0045</td>
</tr>
<tr>
<td>Responsibility for development</td>
<td>0.0803</td>
<td>1.0120</td>
<td>0.0062</td>
<td>0.0783</td>
<td>0.0400</td>
<td>0.0051</td>
<td>0.0090</td>
<td>0.0000</td>
</tr>
<tr>
<td>LDQ Attitudes &amp; Emotions</td>
<td>0.1180</td>
<td>0.1401</td>
<td>0.0601</td>
<td>0.0714</td>
<td>0.1754</td>
<td>0.0538</td>
<td>0.0955</td>
<td>0.0029</td>
</tr>
<tr>
<td>Work development outcomes</td>
<td>0.2116</td>
<td>0.2262</td>
<td>0.0765</td>
<td>0.0818</td>
<td>0.0367</td>
<td>0.0598</td>
<td>0.1060</td>
<td>0.0036</td>
</tr>
<tr>
<td>Personal development outcomes</td>
<td>-0.1187</td>
<td>0.1559</td>
<td>-0.0606</td>
<td>0.0795</td>
<td>-0.0414</td>
<td>-0.0487</td>
<td>-0.0865</td>
<td>0.0034</td>
</tr>
<tr>
<td>Instrumentality of formal learning</td>
<td>-0.9815**</td>
<td>0.2578</td>
<td>-0.2870</td>
<td>0.0754</td>
<td>-0.0805</td>
<td>-0.2433</td>
<td>-0.3981</td>
<td>0.0592</td>
</tr>
<tr>
<td>Instrumentality of informal learning</td>
<td>0.4435†</td>
<td>0.2551</td>
<td>0.1389</td>
<td>0.0799</td>
<td>0.0283</td>
<td>0.1111</td>
<td>0.1943</td>
<td>0.0123</td>
</tr>
<tr>
<td>Overall organisational value and commitment to WBL</td>
<td>0.1626</td>
<td>0.1494</td>
<td>0.1108</td>
<td>0.1018</td>
<td>0.6072</td>
<td>0.0695</td>
<td>0.1231</td>
<td>0.0048</td>
</tr>
<tr>
<td>Organisational value and commitment to WBL through investment</td>
<td>0.1388†</td>
<td>0.0850</td>
<td>0.1413</td>
<td>0.0865</td>
<td>0.5447</td>
<td>0.1043</td>
<td>0.1829</td>
<td>0.0109</td>
</tr>
<tr>
<td>WBL Support</td>
<td>0.1273</td>
<td>0.0801</td>
<td>0.1392</td>
<td>0.0876</td>
<td>0.5963</td>
<td>0.1016</td>
<td>0.1783</td>
<td>0.0103</td>
</tr>
<tr>
<td>Goal Setting</td>
<td>0.2244*</td>
<td>0.0926</td>
<td>0.2719</td>
<td>0.1122</td>
<td>0.6695</td>
<td>0.1549</td>
<td>0.2663</td>
<td>0.0240</td>
</tr>
<tr>
<td>Flexible</td>
<td>0.4661**</td>
<td>0.1544</td>
<td>0.2879</td>
<td>0.0953</td>
<td>0.6325</td>
<td>0.1930</td>
<td>0.3254</td>
<td>0.0372</td>
</tr>
<tr>
<td>Understand Organisational WBL Objectives</td>
<td>0.3631</td>
<td>0.4575</td>
<td>0.0630</td>
<td>0.0794</td>
<td>0.3050</td>
<td>0.0507</td>
<td>0.0901</td>
<td>0.0026</td>
</tr>
<tr>
<td>Goal Acceptance</td>
<td>0.5232*</td>
<td>0.2693</td>
<td>0.1510</td>
<td>0.0777</td>
<td>0.2209</td>
<td>0.1241</td>
<td>0.2161</td>
<td>0.0154</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.3402</td>
<td>5.3744</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*significant at 0.10
**significant at 0.05
†significant at 0.01
When this variable was entered $R=0.8281$ and both $R^2 (=0.68568, p<0.0001; R^2_{\text{adjusted}} =0.6081)$ and the change in $R^2$ ($R^2_{\text{change}}=0.0154$, $p=0.0557$) were significant indicating that this variable contributed an additional 1.54% to variance in **satisfaction in WBL system**. The $B$ score for the variable entered in this block was also significant ($B=0.5232, p=0.0557$). This variable shares a positive relationship with **satisfaction in WBL system**, indicating that increasingly positive perceptions of **goal acceptance**, as predicted, are associated with increasingly positive **satisfaction in WBL system**.

Important changes to note at this stage are:

- **Instrumentality of formal learning** has again become increasingly significant ($B=-0.9815, p=0.0003$).

- The pattern of increasing significance of **work development outcomes** is reversed, and work development outcomes have become less significant ($B=0.2116, p=0.3524$).

The changes in **instrumentality of formal learning** indicate the presence of a suppressor or moderator variable. Using simple factorial ANOVA techniques the interaction between **instrumentality of formal learning** and **goal acceptance** was found to be non-significant ($F=0.140, p=0.710$). As the $pr$ for **instrumentality for formal learning** is greater than its correlation with the DV ($pr=-0.3981, r=-0.0805$) and **instrumentality of formal learning** shares a significant positive correlation ($r=0.2656$) with **goal acceptance**, **goal acceptance** is indicated as a suppressor variable. The following diagram illustrates the relationship between these two variables and **satisfaction in WBL system**.

![Diagram](image-url)

*Figure 6.19: Suppressor system between formal WBL instrumentality, goal acceptance and DV*
Thus increasingly positive perceptions of *instrumentality of formal WBL* are associated with increasingly positive *goal acceptance*. However, *instrumentality of formal learning* is also negatively related to *satisfaction in WBL system*, whilst *goal acceptance* is positively related to *satisfaction in WBL system*.

The changes in *work development outcomes* indicate the presence of a moderator or test variable. Simple factorial ANOVA techniques indicated that the interaction between *work development outcomes* and *goal acceptance* was not significant (F=0.635, p=0.532). As *goal acceptance* and *work development outcomes* share a significant positive correlation (r=0.2724) *goal acceptance* is indicated as a test variable. Indeed, using the one-way ANOVA technique, significant differences were found between low, medium and high *work development outcome* groups on levels of *goal acceptance* (F=3.0449, p=0.0525, low mean=9.5714, medium mean=10.6667, high mean=11.0625). However Scheffé's test did not detect significant differences between the three groups. Thus whilst *goal acceptance* might be indicated as a test variable intervening in the relationship between *work development outcomes* and *satisfaction in WBL system*, the effect is not strong but may be indicative of effects that might be found in future analyses. The following diagram illustrates the relationship between these variables.

![Diagram](image)

*Figure 6.20: Indirect relationship between work development outcomes and DV*

Thus positive perceptions of *work development outcomes* are associated with positive *goal acceptance*, which in turn is associated with positive *satisfaction in WBL system*. 
6.10 **Evaluation of Overall Model**

The following table represents the final main effects plus interactions model and summarises the changes in $R^2$ at each successive block.

<table>
<thead>
<tr>
<th>Block</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$R^2$ adjusted</th>
<th>$R^2$ change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic individual demographics</td>
<td>0.15831</td>
<td>0.02506</td>
<td>-0.00639</td>
<td>0.02506</td>
</tr>
<tr>
<td>Learning and occupational orientation</td>
<td>0.24343</td>
<td>0.05929</td>
<td>-0.02626</td>
<td>0.03420</td>
</tr>
<tr>
<td>Valued WBL Outcomes</td>
<td>0.25080</td>
<td>0.06290</td>
<td>-0.04607</td>
<td>0.00364</td>
</tr>
<tr>
<td>Instrumentality of WBL</td>
<td>0.28857</td>
<td>0.08327</td>
<td>-0.04769</td>
<td>0.02037</td>
</tr>
<tr>
<td>Employee Perceptions of Organisational Value and Commitment to WBL</td>
<td>0.70260**</td>
<td>0.49365</td>
<td>0.40720</td>
<td>0.41038**</td>
</tr>
<tr>
<td>Instrumentality of formal learning x organisational overall value and commitment to WBL</td>
<td>0.72179**</td>
<td>0.52099</td>
<td>0.43228</td>
<td>0.02734*</td>
</tr>
<tr>
<td>WBL goal setting processes</td>
<td>0.82545**</td>
<td>0.68137</td>
<td>0.60275</td>
<td>0.16038**</td>
</tr>
<tr>
<td>Valued work development outcomes x organisational overall value and commitment to WBL x WBL support</td>
<td>0.83931**</td>
<td>0.70443</td>
<td>0.62665</td>
<td>0.02306*</td>
</tr>
<tr>
<td>Instrumentality of formal learning x goal setting processes x WBL support</td>
<td>0.86296**</td>
<td>0.74459</td>
<td>0.67321</td>
<td>0.04026**</td>
</tr>
<tr>
<td>WBL goal acceptance</td>
<td>0.86743**</td>
<td>0.75243</td>
<td>0.67883</td>
<td>0.007741</td>
</tr>
</tbody>
</table>

** significant at 1% or less
* significant at 5% or less
† approaching significance at 15% or less

**Table 6.11: Final main effects plus interactions model**

All significant interactions were included in the full main effects plus interactions model and the overall adjusted $R^2$ and incremental $R^2$ changes were investigated. The interaction model ($R=0.86743; R^2=0.75243$, $p<0.0001$) accounts for a high 75.243% of the variance in satisfaction in WBL system. When the adjusted $R^2$ figure was investigated in order to compensate for 'overfitting' that may result from the sample size: IVs ratio (Hair et al 1998), this indicated that the model accounted for a high 67.883% of the variance in satisfaction in WBL system.
The summary table 6.11 does not, however, provide a full picture of the inter-relationships between model factors. A number of indirect, suppressor and moderator relationships have also been identified, which are theoretically important as they provide insight into the nature of the relationships between variables. The significant inter-factor relationships found in this stage of the study are summarised in figure 6.21 below. This model illustrates the complexity of the inter-factor relationships within the WBL-motivation model. This figure indicates that findings from the model testing are consistent with proposals represented within the model.

- Firstly, gender and general attitudes and emotions do have an indirect role to play in employee satisfaction in the WBL system;
- Secondly, as expected individual perceptions of work development outcomes and instrumentality of WBL impact on satisfaction;
- Thirdly, an individual’s perception of the organisational approach to WBL in their evaluation of WBL has been highlighted as influential in satisfaction.
- Fourthly, an individual’s perception of WBL interacts with their perceptions of the organisational approach to WBL in their relationship with satisfaction. In cases where individuals have strong positive attitudes to WBL, it is vital that they also perceive the organisation to value and be committed to WBL. This is indicated by the set of complex interactions between instrumentality, goal setting variables and perceptions of the organisation (represented by the shaded area in figure 6.22).
- Fifthly, WBL goal acceptance, as expected, has a role to play in satisfaction with the WBL system. However, it should be noted that in the final main effects plus interactions model (table 6.11) the significance of goal acceptance was reduced. It is acknowledged that the power of the test is reduced for smaller effect sizes, which may explain this reduced significance (see section 3.4.4.1, p.137). However, further investigation indicated that this change was due to the addition of the interaction between instrumentality of formal learning, goal setting processes and WBL support, with which goal acceptance shares a significant correlation (r=0.3317). Multicollinearity was not indicated as a problem between these variables. Interestingly, a significant complex four-way interaction...
Figure 6.21: Resultant micro model of employee perspectives in the WBL-motivation process
between *instrumentality of formal learning, goal setting processes, WBL support and goal acceptance* \((R^2=0.73097, R^2_{adj}=0.65565, R^2_{change}=0.07532, p=0.0081)\) was found, although the sample size in this study was not sufficient to investigate the nature of this interaction further. This issue is worthy of future investigation using a larger sample size and more a sophisticated analysis such as Structural Equational Modelling.

In addition, it was noted that perceptions of the organisation represent various forms of organisational support (understanding needs, being committed to process, providing relevant tangible support), which emerges as an important factor underpinning the motivation process in WBL. Indeed, this was emphasised in the qualitative stage of this study, and is understandable given the nature of WBL as learning related to the workplace where the interaction between employer and employee is of utmost importance. However, this model was tested using two non-LiP organisations, a factor that was indicated as influential on employee perceptions in stage one through its impact on organisational policy and communication. The problem of differential organisational policies and subsequent lack of generalisability of results has been noted by others (Noe and Wilk 1993). Testing the model within LiP companies or companies that have invested in WBL may lead to a reduction in the importance of perceptions of the organisation in understanding satisfaction and confidence in WBL and strengthen the importance of individual variables as proposed by the Reid and Barrington (1997) model.
CHAPTER 7

DISCUSSION AND CONCLUSIONS
Discussion and Conclusions

The central aim of this study was to develop a model representing employee motivational perspectives influential in the WBL process. The previous three chapters (four, five and six) have described in detail the three main stages of model development undertaken within this project. This chapter amalgamates all of these results and considers the combined implications for and contributions to theory, practice and methodology.

7.1 CONTRIBUTIONS TO THEORY

This section will consider the contribution made by the three stages of this project to current theory. An overview of model development will be presented followed by more in-depth discussions of each factor within the model.

7.1.1 Model development

This project sought to contribute to the existing body of theory in the WBL domain through the development a model of the WBL-motivation process, which was identified as lacking in the current WBL literature. This project has fulfilled its central aim by developing a model of the WBL-motivation process. The resultant model represents a micro model focusing on employee perspectives of the WBL-motivation process. This model has moved towards promoting a better understanding of the motivational processes in WBL, in particular by:

1. Clearly defining motivation in the WBL process as a complex, multi-factorial process and thus identifying salient factors within the WBL-motivation process.

2. Exploring relationships and interactions between factors within the WBL-motivation model and indicating some of the important dynamics of the WBL-motivation process.

The three stages of model evolution are discussed below.
Stage One: Initial Development of a WBL-Motivation Model

Initial development of the WBL-motivation model began with a detailed exploration of the appropriate current literature driven by the need to develop a clear definition of motivation and thus develop a generic framework that would aid identification of salient issues. The framework (figure 7.1) proposed by Locke and Henne (1986) and Locke (1991) was used as an initial basis for the project, which represents motivation as a multi-factorial process rather than a uni-dimensional concept.

![Diagram](image)

**Figure 7.1: Factors in the motivation process (Locke and Henne 1986, Locke 1991)**

A key advantage of this framework was that it represented a comprehensive definition of motivation and detailed how motivational theories work together within the motivation process rather than competing with each other. Accordingly, this framework highlights the important building blocks of the motivation process, starting with an individual's basic needs, their values, the goal setting processes (including such issues as expectations), their actual performance, the rewards resulting from performance and their ultimate satisfaction with the process.
This framework was expanded further through the incorporation of existing motivational theories (figure 7.2).

Although the basic factors remain the same, this framework emphasises the need to consider basic demographic and learning/occupational orientations as influential in the motivation process. This framework also recognises that WBL involves both an individual and an organisational input into the WBL process and the potential for interaction between these inputs throughout the motivation process.

Stage one of the study sought to define the factors identified within the motivation framework more specifically within the WBL context. To this end, participant (employer and employee) accounts of the WBL-motivation process were used to drive the development of WBL-specific definitions of the various factors within the model. The resulting model (figure 7.3) demonstrates how WBL-specific factors started to emerge.
Chapter Seven – Discussion and Conclusions

Organisation characteristics

Organisation recognise needs

Organisational input

Organisational commitment to WBL

Goal setting
- Focused & specific goals
- Needs-resources match
- Support structures
- Feedback
- Flexibility
- Understanding of organisational approach to WBL

Goal acceptance & Expectancy

Pragmatic support or barriers

Performance & learning

Ability

Satisfaction in WBL system
     (affect and cognitive elements)

Employee input

Work development outcomes

Individual values formal WBL

Individual values informal WBL

Personal development outcomes

Figure 7.3: The WBL-motivation process; a tentative model following stage one of the research

It was indicated that WBL was perceived as addressing both work and personal development outcomes, that individuals distinguished between formal and informal modes of WBL and the important characteristics of the WBL goal setting processes were highlighted. In addition, this model re-emphasised the potential influence (positive or negative) that the organisation may have on this process, particularly their role as a facilitator of learning through understanding of employee needs, value and commitment to WBL, approach to goal setting and provision of pragmatic support.

Stage Two: Developing Factors in the WBL-Motivation Model

It should be noted at this stage that given that model development is a long process, it is recognised that a structured, staged approach is necessary to make the process more manageable. Therefore, stage two of the project aimed to further refine the emerging model factors from the employee perspective. Accordingly, initial definitions of the factors indicated at the end of stage one (figure 7.3) were further refined through the use of factor analytic techniques, which also demanded the development of a project-specific tool for assessing the factors indicated in the model.
Figure 7.4: The WBL-motivation process; model adapted following factor analysis

The resultant model (figure 7.4) confirmed the existence of the factors indicated in stage one. These factors included, not only an individual’s perceptions of WBL in general (i.e. valued outcomes and instrumentality) but also perceptions of the organisational approach (including organisational value and commitment to WBL and approach to goal setting).

Stage Three: Testing the WBL-Motivation Model

Stage three of the project sought to test the relationships indicated between the resultant refined factors.
Figure 7.5: The WBL-motivation process; model re-specification following inspection of inter-factor relationships

During the last stage of this project initial exploration of the relationships between model factors indicated a need for model re-specification, where ‘organisation understands needs’ was incorporated into the ‘WBL support’ factor (figure 7.5).

Hierarchical multiple regression techniques were then utilised to test the relationships and interactions between factors. Significant relationships are illustrated in figure 7.6.
Chapter Seven – Discussion and Conclusions

Figure 7.6: The WBL-motivation process; model showing significant inter-factor relationships

Figure 7.6 underlines the complexity of the WBL-motivation process, indicating that:

- Gender, general attitudes and emotions to learning, individual perceptions of work development outcomes, instrumentality of WBL, goal setting and goal acceptance have a role to play in the WBL-motivation process;

- Individual perceptions of organisational value and commitment to WBL are influential in the WBL-motivation process;

- Individual perceptions of WBL crucially interact with their perceptions of the organisational value and commitment to WBL throughout the motivation process.

The Final Stage: A Model of the WBL-Motivation Process

Figure 7.7 emphasises the main findings from all stages of this research.
Figure 7.7: The WBL-motivation process; simplified model indicating main findings from the research

Figure 7.7 illustrates:

- WBL-specific factors found to be influential in the motivational process resulting in satisfaction with the WBL system;
- Significant direct, indirect and suppressor inter-factor relationships (indicated by arrows) within the WBL-motivation process;
- Significant interactions between factors (there were a number of complex interactions and these are represented by the shaded area enclosing those factors involved in these interactions).
- Feedback loops between satisfaction and factors within the motivation process indicated within stage one of the research.

The resultant model emphasises that an individual's satisfaction with WBL is not only influenced by perceived valued outcomes and instrumentality of WBL but also by an individual's perception of the
organisational approach to WBL. This emphasises that the characteristics of the learning environment are particularly important, especially the nature of support provided (Noe and Schmitt 1986, Noe and Wilk 1993).

Thus this project has taken a significant step forward in the understanding of employee motivational perspectives in WBL. The resultant model helps to identify salient factors in the WBL-motivation process and further understanding of the inter-factor dynamics. In particular, this model emphasises the important interaction between an individual's perceptions of WBL (e.g. valued outcomes and instrumentality) and their perceptions of how the organisation approaches WBL.

Factors within the model will now be explored in more depth.

### 7.1.2 Demographic Groups and Learning/Occupational Orientations

Demographic groups and learning/occupational orientations are the first factors that are encountered within the model. There are two important points to discuss about these factors. Firstly, throughout the project, differences between demographic groups and learning/occupational orientations in relation to valued WBL outcomes were indicated. Secondly, the nature of the relationship between these factors and satisfaction in the WBL-motivation model.

Differences between demographic groups and learning/occupational orientation groups in terms of valued learning outcomes were indicated throughout the project. These differences were firstly indicated during stage one by participants who identified several potential group differences in terms of the WBL-motivation process, and secondly, during model testing. These differences between demographic groups and learning/occupational orientations in terms of perceived learning needs are consistent with findings in the literature (Boshier and Collins 1983, Livneh and Livneh 1988, Ruiz-Quintanilla and Wilpert 1990, Courtney 1992, Houtkoop and van der Kamp 1992, Tannenbaum and Yukl 1992, Duarte 1995, Newstead et al 1997).

Whilst age did not seem to be related to perceived value of work-development outcomes, older age groups did perceive personal development outcomes to be of less value than younger age groups. Such a finding is partly consistent with suggestions from stage one focus groups that older age groups would perceive less valuable outcomes from learning. More specifically, this seemed to be a function of length of service (to which age was significantly correlated), where longer length of service was associated with less perceived value in personal and work development outcomes.
Again, this is consistent with stage one focus groups suggestions that those who have been employed longer within the organisation may perceive less value in learning, through a perception that they 'know it all' and a lack of recognition of the possibilities for change and consequent demand for learning and development.

However, it was also noted that more senior members of staff valued personal development outcomes to a greater extent than those lower in the hierarchy. Such findings are consistent with others (Courtney 1992, Boshier and Collins 1983, Houtkoop and van der Kamp 1992, Duarte 1995) who have found that orientations towards learning may vary according to career stage. Similarly, those with more advanced academic qualifications perceived more value in work-development outcomes from WBL. Thus, whilst age and length of service may be negatively related to perceived valued WBL outcomes this may be tempered by their position within the hierarchy and their level of academic qualifications. However, during model testing none of these variables were indicated as predictors of overall satisfaction in the WBL system. Although small changes in their relative Beta coefficients might be indicative of an indirect effect through valued outcomes, these coefficients were near zero and thus were of little importance. However, these variables may have a role to play (perhaps indirectly through valued outcomes) in effort invested, participation in or performance in WBL and this would be worthy of future study.

It was also found that female groups valued work development outcomes to a greater extent than male groups, although others have found that men valued work development outcomes more (Ruiz-Quintanilla and Wilpert 1990). This may be explained by focus group suggestions that WBL presented an opportunity for all groups to develop; therefore, females may perceive WBL as a means of standardising developmental opportunities for all employees, consistent with focus group evidence of female perceptions of being underdeveloped within their organisation, and hence place a greater value on WBL in consequence.

Whilst the majority of demographic groups and learning/occupational orientations were not particularly indicated as important factors in the prediction of satisfaction in WBL, two factors 'female' and 'LDQ attitudes and emotions' were indicated as important. During model testing, 'female' was found to have an indirect effect on satisfaction in the WBL system through perceptions of 'organisational value and commitment to WBL through investment'. In this case, female groups were found to have more negative perceptions of 'organisational value and commitment through
investment' than male groups, and hence were less satisfied in the current WBL system. Thus, regardless of the level of actual investment in WBL, perhaps female groups are more sensitive to actual investment in WBL made by organisations given that they also value the work-related outcomes to a greater extent than males. This suggests that as the outcomes from WBL are of importance they demand a greater investment from the organisation, particularly as a demonstration of value and commitment to WBL. Female groups were also found to perceive organisational flexibility in approach to WBL more negatively than male groups. Whilst this might reflect a real difference in terms of flexibility afforded males and females in the organisations under investigation, taken alongside the other gender differences it does suggest that female groups are more sensitive to certain aspects of the WBL system, which may be a reflection of their greater value of work development outcomes.

The 'LDQ attitudes and emotions' scores were also found to have an effect on satisfaction in the WBL system. An indirect effect through perceived 'overall organisational value and commitment to WBL' was indicated, where those with higher LDQ scores also perceived the organisation to value WBL more and be more committed to WBL overall, and were more satisfied with the WBL system. Thus those groups who held more positive attitudes towards learning generally also perceived the organisation to be more valued and committed to WBL. In addition, LDQ scores were positively related to perceived instrumentality of formal WBL, that is, those who held more positive attitudes towards learning also perceived formal WBL to have higher instrumentality, whilst higher perceived instrumentality was negatively related to satisfaction. This proved to be an important suppressor relationship that organisations should be cognisant of when developing WBL systems. The evidence from this project suggests that groups who have more positive attitudes to learning in general are more likely to value formal systems of learning, however, those who value formal learning systems are more likely to be dissatisfied with the WBL system. In other words, groups who have more positive attitudes to learning may initially be more receptive to WBL, however, they may be more sensitive to how WBL is actually developed within the organisation and hence may become dissatisfied more quickly than those groups with a more negative attitude to learning in general.
7.1.3 Valued WBL Outcomes

At the 'core' of motivation in the original framework, was an individual's value set (Locke 1991). Others (Ajzen 1988, Noe 1986, Keller and Kopp 1987) have also indicated the importance of understanding individual values, or the valence of outcomes from action. This project identified that the core valued outcomes in the WBL motivation process for both employees and employers was composed of two distinct groups: work development outcomes and personal development outcomes. Work development outcomes relating to the need to survive in the workplace through development of skills and keeping up-to-date with technology. Personal development outcomes relating to the need for not only career development, but also boosting confidence and boosting morale.

These two categories of work development and personal development outcomes identified by participants closely resemble those highlighted by other studies of learning in the workplace. For example, Seagraves et al (1996) and Nordhaug (1989) identified 'intrinsic' factors or 'psychosocial' factors and 'extrinsic' factors or 'career development' factors, resembling personal development outcomes and work development outcomes respectively. However, both of these studies separated out 'social' factors (such as networking) and 'cognitive' factors (such as increased interest in subject) as distinct factors. In this study employees and employers clearly placed these factors as part of the personal development outcomes category. Social networking was seen as a means of giving access to information and the experiences of others that would enhance personal development. This is consistent with Seagraves et al (1996) who suggested that social orientations might be expected to take a lesser role in WBL. Cognitive interests were identified in terms of making work more interesting, but were viewed as of secondary importance and very much part of overall personal development. In WBL studies (e.g. Seagraves et al 1996) employers have also highlighted similar categories of needs as those emphasised by employers in this study, relating to sustainability, productivity, growth and keeping up with competitors.

Furthermore, this study suggests that a number of valued outcomes, both work development and personal development outcomes, can be addressed by the same behaviour, that is, WBL. This is consistent with the theoretical suggestions that several 'values' may be addressed by the same behaviour at one time point (Maslow 1987, Schein 1988, Reid and Barrington 1997). Work and personal development outcomes were seen as complementary elements that worked together to
benefit the organisation and the individual. Indeed, these categories represented 'instrumentality chains' (Pinder 1984), where specific elements of each chain were linked together to achieve a more fundamental need, such as 'survival' or 'esteem'. Thus a number of concrete, specific valued outcomes were linked to more abstract 'needs'. This underlines that while theory typically separates 'needs' from 'values', in reality individuals do not make such distinctions tending to perceive these entities as a series of outcomes linked in a meaningful chain. Whilst these two factors (work development outcomes and personal development outcomes) were found to be distinct (using factor analytic techniques), they were related (as indicated in stage one), particularly in terms of career prospects (personal development outcome) being linked to work development outcomes, such as development of skills. Thus whilst, the two factors represented separate 'instrumentality chains', they also were perceived as instrumental to each other.

Participants placed more emphasis on the importance of work development outcomes, which is consistent with other research. For example, Newstead et al (1997) found that 'means to an end' needs (similar to work development outcomes) were ranked first by participants and personal development needs were ranked second. Indeed, McGivney (1993) suggests that the stated value of education may predominantly be instrumental because of the limited view of the general public towards the scope of post-school education. However, actual participation may lead to other interests e.g. cognitive, self-development and recreational interests. The emphasis on work development outcomes was initially reflected in the focus groups and was underlined in the model testing phase where perceived valued work development outcomes were seen to play a role in explaining satisfaction with the WBL system, whereas personal development outcomes seemed to have little impact in the overall model. The importance of employees perceiving that WBL will provide valued outcomes was further emphasised in the model testing phase of the project, where work-development outcomes was found to be indirectly related to satisfaction through goal acceptance. Positive perceptions of valued work-development outcomes were linked to greater WBL goal acceptance, which in turn was linked to increased satisfaction. Thus goal acceptance was strengthened where individuals perceived the WBL outcomes as relevant to themselves.

Perhaps the emphasis on work-development outcomes is a reflection of the stance taken to WBL as a reactive tool to cope with work-related deficiencies and a pro-active tool to cope with identified work-related deficiencies, rather than being seen as a growth tool linked to personal development
individuals did not exhibit pro-social behaviours in other aspects of their work, but when asked specifically about WBL the motivation seemed to be based on individual benefits.

**Employer-Employee Congruence and Dissonance**

Finegan (2000) suggests that values are an important area where the potential for dissonance between employer and employee is high. Whilst it is encouraging that employers and employees perceived similar categories of 'valued outcomes', it was clear from stage one of the results that some employees perceived dissonance between employer-employee perceptions of needs, which they reported as leading to dissatisfaction with the overall WBL process. However, as discussed later (see section 7.1.4), this was heavily dependent on organisational approach; where employers used a need identification approach based on LIP principles, flexibility in negotiation (top-down, bottom-up), recognition of employee needs, consistency throughout organisation in approach to WBL and an emphasis on individual responsibility for learning, employees perceived more congruence between employer and employees, leading to increased, self-reported satisfaction with the WBL process. Further support for such linkages was gained in the model-testing phase of the project, where a three way interaction between work development outcomes, perceived overall organisational value and commitment to WBL and WBL support was indicated. It was found that in conditions of high perceived WBL support combined with a high perceived overall organisational value and commitment to WBL that those individuals who valued work-development outcomes were more satisfied with the WBL system. In other words, it was not enough simply to value work-development outcomes, employees must also perceive the organisation to be committed to WBL and as providing the appropriate support to have a significant effect on their overall satisfaction with the system.

As stressed earlier, the perceived valence of outcomes is a key element in motivation; individuals must perceive outcomes as relevant to themselves if they are to be motivated to act (Noe 1986, Keller and Kopp 1987). Evidence from stage one of this project indicates that where employees perceive dissonance between their own perception of 'needs' and their employer's perception of 'needs', this is likely to lead to a rejection or perceived lack of valence of WBL outcomes identified in personal development plans and a lack of self-reported satisfaction and motivation to participate in WBL. Indeed, the link between perceptions of valued work-development outcomes and goal acceptance, discussed earlier, was established within this project. Given that individual motivation
underpins organisational motivation in LLL (Argyris 1999), perceived dissonance impacting on the WBL process may have serious implications for the success of WBL in the future. For the organisation to benefit from learning, individuals within that organisation must be prepared to invest effort in learning and exploit the benefits of WBL (Argyris 1999). Indeed, Keller and Kopp (1987) emphasise the organisational duty to focus on establishing the relevance of learning outcomes to enhance motivation. This may be achieved through increased participation in need identification (Tannenbaum and Yukl 1992) or ensuring that the relevance of organisationally set goals is established through communication channels.

The case of compulsory courses is particularly relevant here. Compulsory courses are an inevitable part of working life in most workplaces (Courtney 1992), however, the evidence from this project indicates that where employees did not understand the importance or relevance of such courses there was resentment and dissatisfaction. It is thus necessary for organisations to justify their use of compulsory courses to employees, increasing the valence of such courses to the individual. On a related note, Finegan (2000) suggests that congruence between individual and organisational values is more likely to lead to greater organisational commitment. Translated in terms of WBL, this would suggest that dissonance between individual and organisational values might lead to lower individual commitment to learning.

In stage three of the project perceptions of organisational understanding of employee needs was incorporated into a general support factor for WBL, which is discussed later (section 7.1.6). Thus perceptions of organisational understanding of needs may represent crucial emotional support provided by the organisation, emphasising that organisations not only benefit from WBL but also are an important source of support for promoting individual motivation, which in turn underpins organisational benefits.

Hay (1995) highlights that a basic need within organisations is to focus on transformational elements, that is, the need to recognise the inevitability of change that will occur and the subsequent demands on employees. WBL plays an important part in development to support successful transformation. The evidence from this project is that from an employee perspective some groups do seem to accept the inevitability of change and the need to develop accordingly, but some groups (discussed in the previous section) may not and this may lead to resistance to change, poor organisational functioning and stagnation. However, this is not just an employee
issue. Alimo-Metcalfe (1999) highlights that managers need to take the lead and develop their transformational skills, not just their transactional ones, thus supporting employee development and ability to cope with change. Indeed, organisations in stage one recognised the importance of ensuring that management endorsed WBL philosophy if WBL was to be effective within the organisation.

7.1.4 Instrumentality of WBL

WBL must be seen as a useful resource if it is to be utilised appropriately by participants (Noe 1986, Keller and Kopp 1987, Ajzen 1988, Latham 1989). The evidence from this project suggests that participants, both employers and employees alike, did view WBL as a useful resource instrumental in helping them to achieve the variety of valued outcomes discussed in the previous chapter. This is encouraging as positive perceptions of WBL as instrumental are likely to promote usage of WBL opportunities. However, it should be noted that employees in stage one of the project made a distinction between formal and informal learning. In general terms, participants viewed formal learning as structured learning, where a specific outcome was attained (for example a skill or qualification) following attendance on an external or in-house course that was often time-constrained. Further, such learning often took place out of context, for example, attending a course on external premises. Thus formal training was viewed more in line with traditional training. More informal learning was viewed as being less structured and as taking diverse forms, frequently not having specific outcomes and often not being time-constrained. This type of learning nearly always took place in the context of work.

Informal WBL was seen as more instrumental than formal WBL. Employees felt that the pragmatic nature of informal learning more clearly highlighted the appropriateness of WBL in addressing needs and promoted transfer of learning to the workplace. That is, as informal learning often took place in context it was easier to see its usefulness and apply that learning to future tasks. This is consistent with Brown and Duguid (1991) who stress that learning needs to be put into context to be meaningful and that learning needs to be concerned with producing ‘practitioners’ rather than simply teaching about practice. Whilst formal learning was viewed as having a part to play in employee development, its distance from the workplace made it more difficult for employees to see its relevance and usefulness to them, which hindered transfer of learning to the workplace. The
main relevance of formal learning was viewed as its relevance to technical and theoretical knowledge.

During model testing biases in perceptions of the instrumentality of formal and informal WBL were found to be a function of valued outcomes, as predicted by the initial model. More positive perceptions of work-development outcomes were associated with increased perceptions of the instrumentality of both formal and informal WBL, whilst more positive perceptions of personal development outcomes was only associated with more positive perceptions of the instrumentality of informal WBL. Thus those who value work-development outcomes may see the potential for development in all forms of WBL, perhaps relating to both the practical elements of work (through informal WBL) and the more technical/theoretical elements of work (through formal WBL). Those who value personal development outcomes may view informal WBL as the best channel to develop such elements in a more flexible context. Thus in theoretical terms, it is important to distinguish between and contrast participant views of formal and informal WBL, and the presence of two distinct factors, namely, perceived instrumentality of formal learning and perceived instrumentality of informal learning, was confirmed using factor analytic techniques.

During model testing perceptions of instrumentality of informal learning was indicated as having a direct role to play in satisfaction with WBL. This indicates the potential role that this variable may play in satisfaction and is worthy of consideration. Instrumentality of informal WBL shared a suppressor relationship with perceived flexibility in the WBL goal setting system, where instrumentality of informal WBL was negatively related to flexibility (which in turn was negatively related to satisfaction) and was positively related to satisfaction. Again such relationships indicate potential areas of tension that organisations should consider when developing WBL. If individuals perceive informal WBL to be a useful resource then they will be more satisfied with WBL generally. This makes intuitive sense if a resource is seen as instrumental in achieving outcomes then satisfaction is likely to be increased, in this case individuals may be satisfied with the organisation's approach to informal elements of WBL. However, those who perceived informal WBL as instrumental also perceived their respective organisations as being less flexible in WBL goal setting and thus their satisfaction was likely to decrease. Again this also makes intuitive sense, given the comments made by participants in stage one. One of the key characteristics of informal WBL praised by participants was its flexibility, thus those who value informal WBL are more likely to
Chapter Seven – Discussion and Conclusions

value flexibility in learning and hence be more sensitive to the organisations level of flexibility in WBL. Thus the organisational approach has the potential to dampen initial enthusiasm for WBL through its lack of flexibility throughout the process.

A direct role was also indicated for perceptions of instrumentality of formal WBL in affecting satisfaction with the WBL system. However, in contrast to instrumentality of informal WBL, instrumentality of formal WBL was found to be negatively associated with satisfaction. Suggesting that those who value formal WBL more highly are not as satisfied with the organisational approach to formal elements of WBL. Model testing indicated that the relationship between instrumentality of formal WBL and satisfaction was further complicated by the presence of several significant interactions amongst variables.

Instrumentality of formal WBL was found to interact with perceptions of organisational overall value and commitment to WBL, where conditions of high perceived instrumentality of formal WBL and high perceived organisational value and commitment to WBL lead to increased satisfaction. This would suggest that when formal WBL was viewed as a useful resource it was also important for the individual to feel that the organisation valued and was committed to WBL, there needed to be congruence between individual and organisational value of WBL resources. The interaction between perceived instrumentality of WBL and perceptions of the organisational value and commitment to WBL is discussed further in the next section.

A significant three-way interaction was also found between instrumentality of formal WBL, goal setting processes and WBL support. In conditions of high perceived instrumentality of formal WBL, high goal setting and high WBL support satisfaction was increased. Thus for those individuals who perceived formal WBL as a useful resource it was important that that they also had positive perceptions of the goal setting process and support provided by the organisation if they were to be satisfied with the WBL system.

Instrumentality of formal WBL was also found to have a suppressor relationship with goal acceptance; where instrumentality of formal WBL was positively related to goal acceptance (which was itself positively related to satisfaction) but was negatively related to satisfaction. This indicates that where individuals do perceive formal WBL as a useful resource they are more likely to accept learning goals, which fits with both theoretical and intuitive reasoning, but in this particular case are likely to be less satisfied with the overall WBL system. Thus highlighting that organisations need to
be cognisant that those that value resources may be more sensitive to organisational approaches to such WBL resources. Indeed, the aforementioned interactions also indicate that the organisational approach is having an important impact on the relationship between instrumentality and satisfaction.

7.1.5 Organisational Value and Commitment to WBL

The above discussion has highlighted the importance of the social context of WBL and the impact that an organisation may have, both negative and positive, on an employee’s approach to WBL. A particularly important variable was individual perceptions of the organisational value and commitment to WBL. A distinction was made using factor analytic techniques between individual perceptions of organisational ‘value and commitment’ overall and organisational ‘value and commitment’ through active investment in learning. Perceptions of the overall organisational value and commitment to WBL focused on the organisation’s recognition of the potential of formal and informal learning opportunities for development of employees in general and of all ages, and a commitment to promoting learning not for achievements of targets and ‘numbers on courses’ but for the achievement of employee development. Perceptions of organisational value and commitment through active investment in WBL focused on the input of time, finance, expertise, a system of reviewing and updating and management at all levels actively taking part in WBL. Thus organisations needed to both communicate a message of real overall value and commitment to WBL and be seen to invest appropriately in learning opportunities if individuals were to view WBL in their organisation in a positive light.

The evidence from stage one of this project supports suggestions by others (Sanders and Yanbouzas 1983, Feldman 1989, Cohen 1990, Tannenbaum et al 1991, Tannenbaum and Yukl 1992, Brennan and Little 1996) that the pre-training or learning environment can influence an employee’s perceptions of the usefulness and importance of WBL opportunities. It was noted that the perceived organisational value and commitment of learning seemed to impact on employees’ perceptions of instrumentality of learning in stage one. In particular, expectations of success or confidence in learning as instrumental was impeded where employees perceived an organisational bias for formal learning, linked with lack of an effective system for exploitation of learning outcomes (formal or informal) and a lack of commitment to learning. Where employees perceived organisations as being fully committed to a programme of learning that utilised all types of learning
effectively, then expectations of success and confidence in learning as instrumental was greatly increased. Thus illustrating Brennan and Little's (1996) and Tannenbaum et al (1991) points that the organisational learning environment can promote the credibility and validity of learning (or perceived instrumentality) by communicating an employer's commitment to WBL from the top, investing resources and making opportunities explicit. Indeed, components of the 'active investment' factor signalled the importance of learning to individuals, in agreement with Feldman (1989).

Understanding of the relationship between perceived organisational value and commitment to WBL and perceived instrumentality of WBL was further developed during model testing. It was noted that perceived organisational value and commitment to WBL was related to individual satisfaction with the current organisational WBL system, in other words confidence in the **specific** WBL system **within** the organisation. However, it was not related to perceived instrumentality of WBL resources **in general**. Rather, perceptions of organisational value and commitment to WBL played an interactive role with valence and instrumentality elements of the model. As discussed in sections above overall organisational value and commitment to WBL moderates the relationship between instrumentality of formal WBL and satisfaction and (along with WBL support) moderates the relationship between work development outcomes and satisfaction. Where WBL is perceived as relevant and useful to individuals then perceptions of organisational value and commitment to WBL crucially impact on satisfaction, when WBL is important to individuals then it is also important that they perceive WBL to be important to the organisational as well. The importance of employee perceptions of employer-employee congruence in terms of values has been stressed elsewhere (Finegan 2000), where individual commitment to WBL was predicted by perceived congruence/dissonance in values. What this suggests therefore, is that perceptions of organisational value and commitment to WBL can both affect perceptions of instrumentality of the specific WBL system within the organisation, and also moderate the relationship between satisfaction and perceived instrumentality of WBL from a generic standpoint.

Thus the current findings also strengthen the argument that the perceived value of particular **within organisation** resources, such as WBL, is likely to permeate throughout an organisation as part of the organisational set of values (McClelland 1961, O'Reilly 1989, Brown 1995, West 1999), although this might not affect perceptions of WBL in general. Importantly, Lynn (1997) has
stressed that the value of learning outcomes must be shared within a 'team' to underpin organisational learning. The implications of the current findings indicate that the organisation can influence an individual's value of within organisation WBL, which may then have a subsequent impact on the success of wider organisational learning. The level of congruence or dissonance between employer and employee perspectives may impact on the development of a set of shared values (O'Reilly 1989, Shamir 1990, Brown 1995). For example, there is evidence in stage one that organisation A demonstrated the 'lip service' disaster, described by Pratt and Kleiner (1989), where organisational promises are not being fulfilled leading to confusion, distrust and cynicism through out the organisation and non-adoption of organisational values. There is evidence from other studies (e.g. CREATE 1996) and this study that processes such as lIP may give employees and employers the power to change a negative mindset to a more positive, pro-development one. A positive organisational value set and appropriate investment in WBL may accelerate the 'learning to learn' process of Reid and Barrington (1997) through promotion of the internalisation of WBL as a useful resource and learning to adopt a pro-active stance to learning.

Such mechanisms may play a crucial role in influencing individual employee's value of WBL and raising its overall profile within the workplace. Thus the organisational context and its potential impact on employee perceptions cannot be ignored. Ajzen (1988), O'Reilly (1989) and West (1999) have underlined the importance of assessing the social context (and associated values) within which behaviour takes place, in this case the organisational environment.

During model testing, the link between active investment and overall organisational value and commitment to WBL and satisfaction was entirely indirect through goal setting variables as indicated by the model. Active investment was positively related to perceptions of flexibility, goal setting and WBL support and overall organisational value and commitment to WBL was positively related to goal setting and flexibility. Thus more positive perceptions of organisational value and commitment to WBL (both overall and active investment) were associated with more positive perceptions of goal setting variables; if the organisation is perceived as valuing and being committed to WBL then individuals are likely to have more positive attitudes to the goal setting process. This is likely to be a two-way relationship where past experiences, explicit statements and behaviours by employers are likely to impact on employee perspectives of WBL (Feldman
1984). Thus experiences of goal setting are likely to feedback into future perceptions of organisational value and commitment to WBL.

### 7.1.6 WBL Goal Setting Processes

Appraisal sessions were the main mechanism for developmental goal setting employed by the organisations in stage one of the project, and employees saw the potential for such meetings in terms of giving them the opportunity to highlight important issues and negotiate learning pathways (although this potential was not always realised). Using factor analytic techniques, in stage two, four distinct factors were identified that characterised the goal setting stage of the model: the actual goal setting procedure; WBL support; flexibility; understanding of organisational objectives for learning.

#### The Goal Setting Procedure

The goal setting procedure was defined by the specific nature of the developmental pathway, the systematic and co-operative nature of need-identification, line management identification of work-development needs arising from new duties, post-learning discussion of the specific individual/organisational benefits and help putting learning into practice, an understanding of the general organisational/individual benefits of the organisational approach to learning and the identification of learning resources and promotion of formal learning opportunities. These aspects of the actual goal setting procedure reflect those aspects of functional goal setting highlighted by others (London 1983, Goldstein 1986, Locke and Henne 1986, Keller and Kopp 1987, Argyle 1989, Tannenbaum and Yukl 1992).

The main problems occurred in goal setting when there was perceived dissonance between employer-employee perceptions of needs, a non-delivery of resources, a resource-need mismatch, a focus on organisational over individual needs, a restriction of the learning opportunities offered or promoted, differences in line managers approaches and a lack of pre- and post-learning discussion. Under such circumstances employees expressed high dissatisfaction and a lack of confidence in the system, they were demoralised and felt a lack of enthusiasm to invest energy in WBL and self-reports of WBL effectiveness were negative. Indeed, such issues as adequacy of resources and nature of the training needs assessment system have been found to make a significant contribution to employee satisfaction in previous studies (Al-Khayyat and Elgamal 1997).
The appraisal process has been found to have a significant impact on overall motivation, where formal appraisals may be thought of as a bureaucratic exercise loosely coupled to how employees are actually evaluated leading to negative feelings of unfairness, inequity, scepticism and anger (Mullin and Sherman 1993). Moreover, the importance of goal setting was established through model testing, where goal setting was found to play a direct role in employee satisfaction with the WBL system. More positive perceptions of the goal setting process were associated with greater satisfaction. Thus where organisations are perceived as fulfilling the various requisites of goal setting employees are generally more satisfied with the system as a whole.

Feldman (1988) highlighted the need for goal pathways to allow for practice of new skills and the application of knowledge to consolidate new skills. Post-training follow-up activities are therefore important in aiding the application of skills and knowledge to everyday work (Baldwin and Magjuka 1991). Where emphasis is not placed on consolidating skills individuals may under stressful conditions relapse and revert to old behaviours (Marx 1982). Indeed, participants in stage one of the study reported such a case happening to them, where a lack of help implementing new skills and knowledge often led to an abandonment of new learning in favour of older behaviours, which negated the time and effort spent attending a ‘course’ originally. Employees were left with a perception that the organisation did not view the learning as important and were less motivated to attempt to apply their new learning in the workplace, as found by other research (Baldwin and Magjuka 1991).

Participants praised the ability to have an input into their own development through the approach mechanism, leading to self-reported greater motivation to learn. However, Baldwin and Magjuka (1991) found this to be a function of organisational policy. Allowing trainees to specify training needed leads to an increase in motivation to learn only when they are actually provided with the learning opportunities specified in the pathway; there is a decrease in motivation to learn when training asked for is not provided. This project echoes these findings, where participants were frustrated that they had negotiated a developmental pathway but the identified resources had not been forthcoming leading them to become demotivated. Similarly, participants were more motivated by the delivery of resources as promised.

The differences in line management approach to WBL were particularly frustrating to participants. They described such a situation in terms of a lottery; the quality of your development may depend
purely on who your line manager is. This had a demoralising effect on participants in terms of WBL, and a feeling of helplessness ensued when, despite positive messages from top-level management, line-management were not providing the same message or adhering to top-level management promises regarding development. Indeed, Albert and Silverman (1983) have pointed out that management development in terms of ensuring that all managers subscribe to the organisational values and approaches is very important, as a lack of consistency between what top level management say and what happens further down the hierarchy can produce distrust and cynicism.

Tannenbaum et al (1991) and Reid and Barrington (1997) both highlight the cyclical nature of learning and development, where positive learning experiences can lead to increased learner commitment to learning, resulting in increased effort and increasingly positive perceptions of the effectiveness of future learning and negative experiences can have the opposite effect. Such a cycle was indeed described by participants in stage one.

The characteristics of the goal setting procedure equate in many ways to the main elements of the psychological contract as defined by Guest and Conway (1997), namely fairness, delivery of promises and trust. The goal setting procedure is a means of actualising the psychological contract; where fairness can be defined in terms of line management differences in approach and top-level management WBL policy; delivery of promises can be defined in terms of whether appropriate learning resources were provided and promoted as laid out in the developmental pathway and the investment of resources in development; and trust can be defined in terms of whether the individual trusts the organisation to support their development and whether the goal setting procedure is seen as a useful or futile exercise. Furthermore, Robinson and Rousseau (1994) suggest that the key violation of the psychological contract is the non-delivery of training and development, a situation echoed by participants in this study. The power of the psychological contract may lie in the strong emotional outcomes resulting from the delivery or non-delivery of promises (Robinson and Rousseau 1994). The evidence from stage one of this project is that going through the actual process of goal setting and then not delivering on promises, a lack of consistency in treatment and a lack of aid in putting learning into practice did result in strong emotional outcomes of demoralisation and dissatisfaction. Thus illustrating the point that the
organisation can have a profound effect on the psychological contract through its HRM practices (Guest and Conway 1997).

**Learning Support**

Learning support formed a distinct but related factor to goal setting procedure (using factor analytic techniques). Learning support was characterised by a mixture of emotional and guidance/informational support (tangible support being represented by the goal setting procedure). Emotional support was defined by line management encouragement to aim for difficult developmental targets, line management discussion of personal development needs arising from new duties and both top and line management understanding of employee developmental needs. Guidance/Information support was defined by the availability of guidance of how to deal with errors, line management discussion of learning goals and availability of advice on demand and line management provision of feedback. The provision of support was integral to a positive WBL experience and deemed by participants to be an important part of the overall goal setting process. Where such support was lacking, participants were demotivated and dissatisfied and felt that a key element of WBL was missing. Indeed, Naish (1995) has found that employer support for WBL has been identified as a key factor in promoting and maintaining employee participation in development opportunities.

The importance of support in an individual’s life is not a new concept, many researchers have shown how crucial a part social support can play in aiding an individual to maintain behaviour and cope with difficulties in many areas of study. Indeed, supervisor and peer support has been found to play an important role in reducing strain in the workplace (defined by emotional exhaustion, depersonalisation and job dissatisfaction) (Dollard, Winefield, Winefield and de Jonge 2000). Similarly supervisor support has been found to be associated with reductions in burnout scores (Poulin and Walter 1993). London (1986) stressed the importance of supervisors in promoting employee development through encouraging growth and supporting career planning and development activities. More specifically, Cohen (1990) has found that supportive supervisors, who discuss learning goals with the individual, can have a positive effect on employee perceptions of learning, sending the message that learning is useful and increasing motivation to learn. The provision of feedback post-learning is also indicated as important in goal setting (Keller and Kopp 1987, Landy 1989, Klein 1989) and organisational learning (Lynn 1997). Where feedback plays
both an informational role by helping individuals to gauge how well they are doing in relation to learning goals, and adjust their behaviour accordingly (Klein 1989), and an emotional role by providing a sense of being supported (Wiley 1997). Thus, the elements of support identified by participants as important accord with those key elements found within the literature.

It is important to note that 'WBL support' was not indicated as having a significant direct role in satisfaction. However, this variable did approach significance and its relationship with satisfaction may, therefore be worthy of further investigation. 'WBL support' seemed to be indicated more as a moderating variable in the overall model. As discussed in previous sections above, 'WBL support' moderated the relationship between work development outcomes and satisfaction (alongside overall organisational value and commitment to WBL), and the relationship between instrumentality of formal WBL and satisfaction (alongside goal setting). Thus, where employees perceived WBL as both relevant and useful, they also needed to perceive appropriate provision of emotional and informational support in order to be satisfied with the system. WBL support was also indicated as intervening between organisational value and commitment to WBL through active investment and satisfaction. Thus, whilst the direct relationship between WBL support and satisfaction may not be strong, it is certainly indicated as an important moderating and mediating variable in the overall model.

**Flexibility**

The flexibility factor was defined by the ability for individuals to use their initiative in learning, have a choice in WBL participation, to experiment and try new ways of working, the existence of two-way communication between the employer and the employee, the actual provision of resources by the organisation and the promotion of informal WBL. Thus flexibility was wider than simply allowing individuals some manoeuvrability in terms of learning but was also associated with the promotion of informal approaches to learning and the availability of resources. The promotion of formal learning opportunities was linked to the more formal goal setting procedure factor described above. This reflects the distinction between formal and informal WBL identified earlier. Alongside the formal goal setting procedure, there are also important but less formal mechanisms for the provision of support and flexibility in the WBL process. The inclusion of resource availability and promotion of informal learning opportunities on this factor indicate that those organisations that were seen to deliver their resources and more actively promote informal learning were also viewed as more
flexible in their approach to WBL. Whereas most organisations are likely to promote some form of formal learning opportunity, it does not follow that they will actually deliver the resources or promote informal opportunities as evidenced by the first stage of this project.

Individuals indicated that increased flexibility and negotiation in terms of WBL heightened their sense of ownership over learning goals and they consequently felt more responsibility for the achievement of those goals. In such cases individuals described feeling that the learning and development process was more of a partnership process rather than a dictatorial process, and were encouraged to participate accordingly. Such sentiments are consistent with the literature where it has been found that the level of employee involvement (defined by flexibility and communication processes) coupled with the delivery of promises (discussed earlier) has an impact on employee commitment (Guest and Conway 1997). During model testing flexibility was found to play a direct role in satisfaction with the WBL system, where more positive perceptions of flexibility were associated with greater satisfaction. Thus a degree of flexibility in WBL is established as important to individuals in terms of satisfaction with WBL (affective and cognitive aspects).

There is a debate regarding the nature of employee participation in goal setting. As pointed out previously in the discussion of the psychological contract, Cohen (1990) suggests that voluntary participation leads to greater motivation to learn, greater learning and more positive reactions to training. However, Baldwin and Madjuka (1991) found that this was only the case where resources were delivered as promised, findings that are supported by this project. In addition, it has been found that whether goals are assigned or self-set they must be relevant and/or justified to the individual concerned if they are to be accepted and pursued (Latham et al 1987), and the credibility of the source assigning goals is also important at this stage (Klein 1989). However, participants in this study did see flexibility in negotiating developmental pathways as optimum and the feelings that they described as a result of being able to participate in some way are consistent with those found by others, namely, an enhancement of feelings of being involved and important, creation of more realistic expectations, an enhancement of the sense of choice, increased feelings of responsibility and an alignment of learning needs and goals (O'Reilly 1989, Tannenbaum and Yukl 1992). The importance of participation and flexibility may be a function of the individual's baseline 'motivation to learn' (defined by valence). For example, Richer and Vallerand (1995) have found that controlling, punitive environments are more negatively perceived by those who are highly
motivated than those who have lower motivation. In WBL terms, therefore, those who are more highly motivated to learn may resent a more controlling, punitive environment. Indeed, during model testing it was found that those who had positive perceptions of the instrumentality of formal learning had negative views of flexibility.

Hay (1995) has highlighted the need for 'developmental alliances' between employer and employee, characterised by the elements described above: person-led; two-way communication; recognition of employee and employer needs; long term or broad focus; flexible collaborative identification of learning opportunities rather than simple provision of a range of opportunities. Such an approach fits with lifelong learning (LLL) philosophy and may be more applicable to the current employment climate, where long-term employment may not be a reality and employers need to recognise that employees may need broader skills to enable workplace manoeuvrability. Such an approach may be well received by employees, as participants in this study welcomed the partnership approach to development and were cognisant of the needs served by WBL not just for themselves but for the organisation as well (although their main motivation was still based on self-benefits).

**Understanding Organisational Objectives in Relation to WBL**

Whilst an understanding of the benefits of WBL formed part of the goal setting procedure factor, an individual's understanding of the organisational objectives in relation to WBL were found to form a distinct factor using factor analytic techniques. This factor was characterised by an individual's understanding of the organisation's general practical approach to learning and what the organisational overall and learning objectives were. Employees felt that a lack of understanding of these elements was a hindrance to the WBL process, as they lacked an understanding of the direction in which the organisation was trying to develop, and a clear understanding of the practical approach to WBL was necessary to understand how this would affect their own development and what systems were directing their development. Indeed, those organisations who had gone through the IIP process indicated that a key outcome was the need to improve communication regarding employee development and increase awareness of the organisational approach and opportunities available.

These findings are consistent with suggestions that formal communication systems should be in place to promote employee understanding of the organisational systems and to promote a 'shared
vision’ (Pratt and Kleiner 1989, Brown 1995). Such formal mechanisms may be in the form of induction training, ongoing training and mentoring systems that consistently promote understanding and the ‘shared vision’ (Pratt and Kleiner 1989, Brown 1995), the very elements lacking in pre-liP organisations in stage one, where many individuals reported a lack of a shared vision of what the organisation was trying to achieve. Post-liP groups were seen to employ such mechanisms with self-reported success. There is a need to promote formal communication systems that communicate such a vision in order to counter the potentially negative effects of informal communication systems where stories and jokes may be used to distort the message (Brown 1995).

Furthermore, this guiding vision needs to be directed visibly by top-level management and shared throughout the whole organisation (Peters and Waterman 1982, O’Reilly 1989). Communication must come from a credible and consistent source, where management commitment and enthusiasm for organisational values must be visible through action as well as words (O’Reilly 1989, Pratt and Kleiner 1989). The lack of consistency in line management approaches to WBL and a perceived lack of active investment in WBL have already been discussed as influential factors in the motivation process, they may also impact on the individuals understanding of the organisational WBL objectives.

It should be noted that during model testing this variable was not indicated as having significant direct role in satisfaction with the WBL system (although this variable did start to approach significance). Indeed, this variable did not seem to play a major role throughout the model. However, as highlighted earlier, this factor was composed of an understanding of organisational objectives to WBL, the understanding of the benefits to individual/organisation and how they can help achieve this formed part of the goal-setting factor, which was significant in the overall model.

In terms of the overall goal setting system, it has been suggested that organisational values are likely to impact on goal setting (O’Reilly 1989, Brown 1995, West 1999). This was demonstrated in stage one where there were distinct differences between those organisations in the Pre-liP group and those in the Post-liP group. It is noticeable that the pre-liP approach to goal setting lacked key elements indicated in success of goal setting: specific and focused goals; feedback and communication; employee input, negotiation and flexibility (Argyle 1989, Goldstein 1986).
7.1.7 WBL Goal Acceptance and Expectations

Goal acceptance was defined by an individual’s perceptions of the relevance of goals, whether they were focused and specific and whether they were realistic. Expectancy of success was defined by an individual’s perception that they could achieve the learning goals set along a developmental pathway. Using participant accounts of expectancy and goal acceptance it was clear that the two concepts were intricately linked; expectancy of success was an integral part of goal acceptance. It was clear that participants viewed both concepts as representative of the degree of confidence that an individual had in the achievability of the set learning goals. In stage two, analysis of factor structure using principal components analysis indicated that expectancy and goal acceptance do form a single factor. The participants’ definition of goal acceptance is consistent with Leifer and McGannon (1986) who suggested that goal acceptance was an attitude regarding the reasonableness and personal acceptability of a goal.

Whilst the concept of expectancy was originally placed earlier in the model, alongside valence and instrumentality, and goal acceptance is traditionally part of goal setting, participants described both concepts as outcomes, rather than precursors, of the goal setting procedure. That is, an individual’s assessment of confidence in the achievability of WBL goals (expectancy and goal acceptance) was based on an assessment of how goals were set, what support structures were in place to help achieve those goals, the degree of flexibility in WBL and a general understanding of the organisation’s WBL objectives, hence the positioning of goal acceptance and expectancy in the current model. In particular, the relevance of goals was based on valence assessments, perceptions of the focused and specific nature of goals were directly based on the goal setting procedure, perceptions of the realistic nature of goals were based on perceptions of organisational approach to WBL resources and associated WBL support. In terms of expectancy of success, this was not only based on their own perceptions of their ability, but also their perceptions of the organisational ability to support them in their achievement of goals and their perceptions of the instrumentality of WBL. Thus the effects of prior model variables on evaluations of expectancy and goal acceptance were clearly demonstrated in stage one of the project. Indeed, pre-IIP groups formed a negative perception of learning and its effectiveness and had difficulty in accepting goals, post-IIP groups formed a positive perception of learning and its effectiveness and more readily accepted goals.
These findings are consistent with others who have found that positive perceptions of supervisory support, valence and instrumentality can positively influence goal acceptance (Hollenback and Klein 1987, Renn et al 1999). Further, Ajzen (1988) and Lazarus and Folkman (1984) suggested that individual expectancy assessments might be partly based on an individual's belief about the efficacy of available resources, which in turn are influenced by past experiences and perceptions of support (Lawler and Suttle 1973, Pinder 1984, Ajzen 1988). Others have found that perceptions of support and that the environment is lacking in essential resources often leads to a reduction in expectancy of success (Cohen 1990, Mathieu et al 1992). As early as 1978, Rubenson recognised that the perceptions that opportunities to learn are not available and that organisational policy does not support development can have far-reaching effects on an individual's expectations regarding their own ability to participate successfully. Indeed, in the second phase of factor analysis, expectancy was found to load onto the satisfaction with the organisational WBL system factor, reinforcing the point that perceptions of individual efficacy (ability to successfully participate in WBL) are intricately linked to perceived organisational efficacy, underlining the importance of the organisational context of WBL. However, it should be noted that VanYperen (1998) found that those who had higher self-efficacy were less sensitive to perceptions of the efficacy of organisational support. Thus the importance of the organisational context may be tempered against the level of self-efficacy that an individual may have with regard to WBL.

In tandem with Renn et al (1999) goal acceptance was indicated as having a direct role in satisfaction with the WBL system, where more positive perceptions of goal acceptance were associated with greater satisfaction. Indeed, it seems to make both intuitive and theoretical sense that those who accepted their learning goals were more satisfied with the system overall; whether this is based on the fact that those who accepted their learning goals had more achievable goals, or those who accepted their learning goals put more effort into achieving their goals. Indeed, goal acceptance has been shown to be related to participation rates (Renn et al 1999), and Locke et al (1988) have suggested that for an individual to invest energy in meeting a goal they must accept that goal.

### 7.1.8 Satisfaction with the WBL system

Employees in stage one of the study stated that the key outcome for them of participating in the WBL-motivation process (represented by the prior model variables discussed above of valence,
instrumentality, organisational value and commitment, goal setting, goal acceptance) was a sense of satisfaction characterised by both affective and cognitive (and associated confidence) elements. Affect was defined by heightened feelings of being valued by the organisation, a boost to morale, feeling encouraged, and looking forward to going to work. Cognition was defined by an appraisal of the current WBL system in terms of whether it will achieve both the individual and organisational benefits, that the organisation will continue to review and develop the system, that the organisation makes the most of learning resources and an associated sense of confidence in the system. Factor analytic techniques confirmed that these elements formed a single factor, supporting the assessment of satisfaction as a dual concept composed of an affective and a cognitive element. Furthermore the evidence from this study supports Warr et al (1999) who suggest that trainee reactions are often measured in terms that are too narrow, namely level of enjoyment in training. They suggest that such evaluations should be broadened to include cognitive elements asking participants how useful they perceive training to be, akin to the cognitive/confidence elements assessed in this study. Indeed, Warr et al (1999) went on to find that enjoyment and usefulness perceptions were correlated with one another, as affective and cognitive elements were in this study. A sense of satisfaction was clearly important to individuals, giving the sense that the cycle of motivation through to successful performance is complete. It was not enough to have simply participated or have gained the rewards but they must feel satisfied with those outcomes. Indeed, Maslow (1987) highlighted the importance of need-satisfaction, which Locke (1991) points out as important at the end of the motivation cycle.

Employees stated that the affective and cognitive elements of satisfaction were extremely important influences in forming their future overall attitude to WBL and consequently affecting their enthusiasm for future development projects and WBL. Satisfaction is thus seen as an important outcome of the WBL-motivation process, which will feedback into the model and potentially affect future motivation in WBL, particularly future expectations of success. In line with Reid and Barrington (1987) and Locke (1991), participants felt that a perceived lack of need-satisfaction led to reduced confidence and enthusiasm in WBL, which they felt lowered their future expectations of WBL and thus influenced their overall attitude to WBL, as evidenced in the pre-IIP group in stage one. Similarly, positive perceptions of need-satisfaction led to heightened confidence in and enthusiasm for WBL and more positive future expectations of WBL, and hence, a more positive attitude and approach to future WBL opportunities, as evidenced by the post-IIP group in stage
These findings are supported by Tannenbaum et al (1991) who found that satisfaction with training was positively related to increased expectancy that training would be useful in the future and commitment to the organisation, similar to outcomes of IIP participation (CREATE 1996). Indeed, it has also been suggested that dissatisfaction leads to a reduction in expectations of success (Howard 1989). Furthermore, confidence in learning has been highlighted as an important factor in the cycle of an individual learning to learning (Reid and Barrington 1997). Indeed, Tannenbaum et al (1991) have demonstrated that confidence is an important precursor to the successful transfer of learning to practical situations. Warr et al (1999) found that learning confidence had an important role to play in the level of learning outcomes.

As discussed above, it is also important to note that in the second phase of factor analysis the individual's expectancy in his or her own ability to successfully participate in WBL loaded onto the satisfaction factor. This indicated that perceptions of self-efficacy were linked to perceptions of organisational efficacy, at least in the two organisations involved in this phase of testing. This is reinforced by the discussion of WBL definitions (chapter 4, section 4.2), which employees tended to refer to as training; something that is done to them rather than something they do for themselves. Whilst this finding might be an artefact of the sample used, the literature presents many examples of such close linkages between individual and organisational efficacy. For example, Silvester et al (1999) found that trainees, enrolled on a cultural change programme, perceived the success of the programme to bring about change to be caused by external factors (e.g. managerial attitudes and behaviour and organisational policy) rather than by what they did themselves. Richer and Vallerand (1995) found that perceptions of supervisor support affected feelings of efficacy and self-determination. The evidence from these findings thus presents some support for the intimation that an individual may also include an evaluation of 'perceived collective efficacy' in their assessments of expectancy, where an individual may feel ineffectual if they perceive the organisation as ineffective (Shamir 1990). Maurer and Tarullli (1994) found that the perception that organisational policies, rules, guidelines and regulations facilitate WBL participation influenced development activity. The link between individual perceptions of self-efficacy and organisational efficacy in the WBL-motivation process is certainly worthy of further investigation.

Perhaps one of the linkages between evaluations of self-efficacy and organisational efficacy may be the systems utilised by organisations to evaluate and exploit learning outcomes. The
importance of reviewing and developing WBL in the future was emphasised by employees as part of the confidence element of satisfaction. Reviewing and updating of systems was viewed as essential to ensure that learning opportunities were successful in achieving benefits, that learning was useful in the workplace and that the organisation actually made an effort to utilise learning and thus facilitate organisational learning. In stage one, pre-IIP groups lamented at the lack of systems to evaluate and exploit learning to the full and consequently felt that the system was not useful and did not promote individual or organisational learning. In common with participant suggestions, Schein (1996) has pointed out that where individual learning is not fed back to the team organisational learning fails. Furthermore, Tannenbaum and Yukl (1992) found that evaluation played an important part in employee attitudes to WBL. The lack of evaluation of learning reported by participants is not uncommon in organisations (Tannenbaum and Yukl 1992). Indeed, Warr et al (1999) have highlighted that there is a 'widespread' need to improve evaluation of learning and development within organisations.

However, there is also a need to more clearly understand the link between employee reactions, with amount of learning, job performance and impact on the whole organisation (Warr et al 1999). Current thinking indicates that satisfaction and performance are indirectly linked. Indeed, a new body of evidence is emerging that links satisfaction with performance in a non-linear relationship, and it was suggested that a strong relationship between satisfaction and performance is present in conditions of high satisfaction and where role conflict is low, thus the relationship between the two is bounded (Somers 2001). Satisfaction was indicated as extremely important to employees and future research may indicate the influence that satisfaction has on WBL performance. The relationship between motivation and participation or performance has not been explicitly explored within this project, and is certainly an avenue for future exploration and indeed is the focus of much research.

### 7.2 Contributions to Practice

The micro model of employee perspectives in the WBL-motivation process developed within this project can inform WBL practice through provision of a deeper understanding of the issues salient to employees within the context of WBL. Such a model can heighten an individual employee's awareness of their own perspectives of WBL, which is an important step towards empowerment and change. Similarly, organisations can raise their own awareness of employee perspectives that...
can inform their approach to WBL and aid in the development of techniques for the promotion of WBL. In addition, this project clearly indicates that employees’ perceptions of and interactions with the organisation (e.g. value and commitment to WBL and WBL goal setting processes) can have a profound effect on satisfaction with WBL, not only directly, but also through moderating the relationship between individual orientations towards WBL (e.g. valued outcomes and instrumentality) and satisfaction. The evidence from this project suggests that the key to success of WBL is to form effective partnerships between employers and employees, a point emphasised elsewhere (Pedler et al 1997).

A number of issues in particular can be highlighted as worthy of attention in the practice of WBL.

### 7.2.1 Understanding WBL

The term WBL was not really utilised by participating organisations in stage one of this research, where there was a tendency to refer to WBL as ‘training’ regardless of its format. This indicated that WBL was still perceived as a more formal element of work life, something that was imposed on individuals rather than something that they discovered for themselves. Whilst it was clear that all participants in stage one of the project recognised the potential diversity of WBL, ranging from formal to informal opportunities, they may still perceive learning as a separate entity from everyday work. The essence of WBL, particularly, informal WBL, is that it is indistinct from work, individuals can learn in a continuous process from all aspects of their work life rather than learning being presented in fragmented, self-contained ‘training’ packages. LLL and learning organisation philosophies emphasise the need to view learning as a continuous process to exploit learning to its fullest, stressing the individual’s responsibility for learning (Becker and Dwyer 1994, Pedler et al 1997). From a practical point of view, therefore, it seems that organisations should focus on the promotion of WBL as a continuous process, emphasising that employees and employers take a shared responsibility for exploiting WBL. Employees should not look to the organisation for ‘training’ and organisations should not only promote ‘training’; all aspects of WBL need to be fully recognised.

Attempting to transform perceptions of WBL from ‘training’ to ‘ongoing development’ may be a difficult task, especially as this perception was even prevalent in organisation C (stage one), which has recognised IIP status. Indeed, employer C stated that one of the most daunting tasks facing the organisation was the re-education of their employees in what ‘development’ actually constituted.
and encouraging employees to take initiatives. Furthermore, traditional views of ‘work’ assign a subordinate role to the employee, where the employer initiates direction and initiatives, which probably applies to all aspects of work including learning. A key issue in LLL is that the employee takes responsibility for their own development, the organisation are seen as a facilitator rather than a dictator of development (Pedler et al 1997) and employees cannot truly achieve this until they begin to view learning in a less formal or directed way. The first step towards a true learning organisation may be to change individual perceptions of what WBL actually entails and to encourage individual recognition of their own responsibility to learn. Indeed, Reid and Barrington (1997) highlighted the importance of teaching employees to ‘learn to learn’ in the promotion of continuous development and learning, and warned against destroying an individual’s level of curiosity by adherence to a formal strict learning policy.

7.2.2 Cultural Change

Allied to the need to more fully promote all aspects of WBL is the need for cultural change. This is consistent with the literature, which emphasises that cultural change is a key issue in successful LLL (Sloman 1993, Pedler et al 1997). Although cultural change was not an explicit focus of this project, it is certainly an area worthy of further investigation in the future. The prevailing cultural aspects within an organisation may have important implications for the success of WBL. For example, stage one employers indicated cultural change, particularly emphasising the value of WBL, as a potentially important element in the appropriate application of organisation learning policy. In addition, it was noted in stage one that the employers and employees from the same organisation gave similar definitions of WBL. Indicating the impact that employer approaches to WBL may be having on their employees’ recognition of WBL opportunities, particularly in restricting recognition of informal WBL opportunities. Thus, cultural considerations, such as values, may be an important element in the success of WBL. Organisations, therefore, need to be careful in how they promote WBL, and should be cognisant of any biases towards particular forms of WBL. One form of WBL should not be promoted to the detriment of other forms.

Silvester et al (1999) points out that cultural change is a complex issue with many vagaries in the literature, and that new methods to aid systematic exploration of cultural change need to be developed. They proposed a model of cultural change based on socio-cognition, which is underpinned by an understanding of causal attributes based on dimensions posited by Weiner
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(1986) of stable-unstable, global-specific, internal-external and controllable-uncontrollable. The use of attributions to more fully explore cultural change in the motivation-WBL process may be helpful, given the current emphasis placed on individual perceptions in the current model, particularly the evident external attributions individuals make about the success of WBL. Silvester et al (1999) suggest that such causal attributions may form the cognitive ‘building blocks’ of organisational culture. As long as individuals continue to attribute success of WBL to the organisational system rather than to their own effort we are unlikely to see a true cultural change towards a learning organisation, where individuals perceived learning to be their own responsibility and succeed through their own input.

Employers in stage one of the project were concerned that the greatest challenge they faced was to change the prevailing training culture to a development culture. This change needed to be brought about throughout the organisation, not least at managerial level, where it has been suggested that management development is essential to improve consistency through the organisations, particularly in terms of organisational values and application of policy (Albert and Silverman 1983, Pedler et al 1997).

7.2.3 Establishing Relevance and Utility of WBL

It was clear from the theoretical discussion that employees and employers alike did value a number of outcomes that could be achieved through WBL. This project has identified two major categories of outcomes perceived as being addressed by WBL, namely, work development and personal development outcomes, and model testing has indicated the particular importance of work development outcomes to individuals. Understanding the relevance of learning to individuals is invaluable in the design and promotion of learning systems, indeed Maurer and Tarulli (1994, p. 12) have stated that:

knowledge of the potential differences in employee values may be particularly useful when implementing and marketing an employee development program

The evidence from this project indicates that organisations must not only market WBL as relevant to work development outcomes but must also ensure that they promote learning opportunities that enhance the development of such work related skills.

Furthermore, individual perceptions of the instrumentality of informal as opposed to formal WBL did have implications for the organisational approach to learning. Employees stated that the pragmatic
setting of informal WBL increased the transparency of its instrumentality in addressing valued outcomes and easing transfer of learning. On the other hand, formal WBL was seen as useful but was seen as less instrumental because of its distance from the workplace context. Tannenbaum and Yukl (1992) and Keller and Kopp (1987), amongst others, has stressed the need for organisations to promote the usefulness and relevance of learning prior to individuals taking part in learning and promoting transfer of learning post-learning. The evidence from this research indicates that this is clearly the case for formal learning. Thus, on a pragmatic level, organisations need to focus on both pre- and post-learning promotion of the utility of learning and transfer of learning. Indeed, there was evidence of this in organisations B and C in stage one of the research, where employers took the time to aid employees understanding of learning, which was appreciated by employees.

As stressed earlier, organisations also need to be cognisant of their own biases for formal and informal learning, particularly as this was seen to influence their promotion, facilitation and identification of learning resources. Organisational biases may be dissonant with employee views, which is likely to lead to friction and a lack of effort on the part of the individual. Organisations may need to challenge their own biases and ensure that appropriate forms of WBL are promoted throughout the organisation.

7.2.4 Perceptions of Organisational Value of and Commitment to WBL

Employee perceptions of organisational value and commitment to WBL might impact positively or negatively on employee perceptions of the instrumentality of learning. Several authors (Cohen 1990, Feldman 1989, Tannenbaum and Yukl 1992) have indicated that organisational value and commitment is communicated to employees through action as well as words. Thus, on a pragmatic level, organisations need to ensure that their actions emphasise that WBL is a useful resource, valued by the organisation. Whilst this seems an obvious point, it was clear from the first stage of this project that organisations were not always cognisant of the image that they were portraying to individuals. In particular, WBL promoted within the organisation should be congruent with the values promoted by the organisation (Brown 1995). Where actions contradict words, a 'lip service disaster' is perceived, which leads to a non-adoption of organisational values (Pratt and Kleiner 1989). This was clearly indicated through evidence presented by this project. For example, in stage one employer A was perceived as contradicting its supposed commitment and value of WBL
through an active policy of promoting formal WBL at the expense of informal opportunities. Employees in this organisation valued formal learning to a lesser extent than informal learning. Whilst employees from all three organisations in the first stage valued informal learning above formal, it is likely that the organisational approach (employer A) to WBL (which was perceived negatively) strengthened this view in employees A.

These findings underline that merely ‘putting somebody on a course’ or providing a mentor is not enough, the issue is more complex and may be more dependent on employer-employee interactions. Whilst the individual may be initially enthusiastic about WBL, seeing it as a relevant and a useful resource, the approach that the organisation makes can moderate the relationship between initial enthusiasm and satisfaction. In particular, perceptions that the organisation does not value or is not committed to WBL, lack of appropriate WBL support and negative perceptions of goal setting can dampen this initial enthusiasm and thus have a negative impact on WBL. In other words when learning is important to the individual then they must perceive it to be important to the organisation otherwise this will seriously affect their satisfaction with the system. Thus organisations must examine their approach to WBL from a holistic viewpoint and recognise the potential role they play in supporting and facilitating the WBL-motivation process.

7.2.5 WBL Goal Setting

WBL goal setting was indicated as an important factor in the overall model. Although goal setting is not a new concept, it was obvious that individuals perceived this as an important process. Moreover, the appraisal system, the main mechanism for goal setting, still remained the main interaction between employees and employers to discuss development and was important in the motivation process, a finding supported by others (e.g. Mullin and Sherman 1993). However, Mullin and Sherman (1993) suggest that in practice formal appraisal processes are all too often given: inadequate priority; weak planning; obsolete instrumentation; perfunctory implementation. Indeed, in stage one of the research, participants could see the potential of appraisals for promoting development but were disappointed with the inefficiency of the current appraisal system. Thus the appraisal system is an essential resource for the promotion of WBL, part of the fabric of organisations, but may often be handled badly by organisations. However, it has been suggested that this process is more amenable to change that many other less tangible factors (Locke 1991). For example, processes such as LlP may have a positive significant impact on the goal setting
process as evidenced by this project. Thus organisations could use the review of appraisals as a starting point in the promotion of WBL. This project has identified the particular aspects of goal setting that employees view as important and these are aspects that organisations may wish to focus on in order to streamline their goal setting process and make it more acceptable to employees. Namely, consultation, linked to clear strategy, recognition of individual needs and appropriate support. Furthermore, this project supports the national focus on the promotion of quality standards such as IIP as employees were more positive in those organisations that were IIP registered.

The first stage of this project also highlighted that there was often a perception amongst participants that they could not participate in WBL because of three main barriers: lack of time; deployment of personnel; financial considerations. Cookson (1986) stresses that perceptions of ‘energy to invest in activities’ is equal to a margin based on the ratio of power to load, where power (capacities, resources etc.) should always outweigh load (responsibilities and constraints). Thus organisations on a very practical level may influence individual perceptions of energy to invest in learning by examining and providing appropriate resources (concentrating on the three principal barriers) to ensure that individuals perceive that their ‘power’ outweighs their ‘load’. Although it is recognised that in some cases resources may simply not be available, an assessment of these barriers may indicate some areas that can be improved and thus relieve strain on employees.

Furthermore, an individual’s expectancy of success was closely linked to their perceptions of the organisation’s efficacy. Goal setting processes should ensure that mechanisms such as feedback and practicing of skills in the workplace are in place that encourage individuals to allocate success to themselves (Keller and Kopp 1987). This is particularly important as perceptions of self-efficacy has been found to increase resiliency when obstacles are encountered and stop individuals falling back on old behaviours in order to cope (Max 1982).

7.2.6 Evaluation of WBL

Employees stated that a lack of evaluation of WBL utilised within the organisation both signalled a lack of perceived organisational value and commitment to WBL and also reduced their confidence in the WBL system for the future. Such a situation is not uncommon, indeed, many authors lament how little evaluation of training and development is carried out in general and suggest that the lack of evaluation is surprising given the amount of scrutiny other investments receive (Patrick 1992).
Thus organisations should review their evaluation strategies and ensure that ineffective modes of WBL are identified and updated.

This may be particularly important in the case of informal WBL, as employers and employees in stage one were cognisant of the lack of evaluation given to informal WBL in comparison to formal WBL. Indeed, Tannenbaum and Yukl (1992), Warr et al (1999) and Patrick (1992) have suggested that most organisations do not use mentoring and other forms of on-the-job training in a systemic way, often relying on informal WBL without following up results. However, participants were unsure how to properly appraise such forms of learning without restricting the flexibility inherent in such forms of learning, elements most praised by employees. Consideration needs to be given to how more informal aspects of WBL can be evaluated. It may be that semi-formal types of WBL such as mentoring and coaching may be amenable to some form of cataloguing without endangering their informality. However, very informal modes of WBL, such as learning from experience, may only be susceptible to evaluation on a subjective level through employees keeping developmental logs and may never be evaluated to the same degree as more formal modes of WBL (particularly as these have set learning outcomes).

7.3 CONTRIBUTIONS TO METHODOLOGY

This project also sought to contribute to the existing methodological background in the field of motivation and WBL through both identification of salient motivational indicators and also construction of an approach to the study and measurement of these indicators.

Model development has helped to both identify and more clearly define indicators to assess motivation within the context of WBL. As such measurement of motivation is based on a multi-dimensional process rather than a simple one-dimensional concept. These indicators take the form of the factors included within the model and provide direction in terms of what are the important variables to assess when studying the motivation-WBL process. Using a multi-staged approach, each factor has been defined specifically with the WBL context and which aspects are important to individuals have been identified. The current model goes some way towards uncovering the scope of factors that need to be assessed and how these factors are likely to interact.

The project has also constructed and piloted a questionnaire designed to test the variables contained within the model; an approach that opens the model to testing and can be used by
others to assess the relevance of model variables to their own cases. Whilst this questionnaire has been used to test a theoretical model, it has also been used on an operational level within organisations to identify areas of strength and weakness in their WBL system as a basis for future development. The results of such assessments have been well received by the organisations involved and underline the pragmatic utility of the questionnaire. Indeed, the questionnaire is flexible in that it can be used in part to assess particular aspects of the model or in whole to assess the whole process. However, it is recognised that these tools requires further refinement, which may require a return to qualitative approaches in terms of honing factor definitions and exploration of factor interactions. In addition, for the tool to be used on a wider scale, construction of norms, with test-retest reliabilities and a manual describing development and usage would be an advantage. Further, within this project there was a tension between developing a tool that was concise for practical use and comprehensive for research application. It may be useful to develop two versions of the tool, one for organisational use and one for research applications.

Furthermore, tool development has highlighted the utility of measuring needs and values together in an instrumentality chain rather than assessing them separately. Both qualitative and quantitative methods did not indicate the need for separate needs versus values scales. Such findings are consistent with Pinder (1984) who highlighted the need to understand the nature of instrumentality chains linking needs and values.

### 7.3.1 Limitations within this project

This project was based on self-report data, which has been proposed as essential in the study of development activity (Maurer and Tarulli 1994), and indeed was invaluable in the development of the current model. Further the use of self-report measures is supported within the field as a valid and common practice (Warr et al 1999). However, it is recognised that when using self-report data one would expect to gain high correlations between model factors and outcomes in the form of individual reactions (such as satisfaction) – (Warr et al 1999) and thus caution should be exercised in interpreting the results based on a correlational analysis. However it was deemed appropriate to utilise individual perceptions as it has been found that subjective perceptions of organisations are actually more important in terms of predicting individual variables than objective measures (Warr et al 1999). It is the situation as perceived by the individual that is often most important.
In addition, this self-report data was surveyed at one time point making it difficult to assess both pre and post reactions to WBL and cause and effect relationships (Tannenbaum and Yukl 1992, Finegan 2000). Although it should be recognised that the continuous nature of WBL and the potential for more flexible types of WBL makes this difficult to assess. However, both consistency with other literature findings and also consistency between the current study samples gives confidence to the current results (Maurer and Tarulli 1994). Furthermore, results are consistent with a framework, based on established theory, that indicates the ordering of variables and thus is not solely based on primary results. Thus it is recognised that this project has sought to develop a model of the WBL-motivation process from a general standpoint. Pre- and post reactions could be assessed using a time-constrained learning opportunity, utilising pre-, mid- and post-time points measurements. However, this may be an artificial situation as individuals are likely to participate in multiple WBL opportunities rather than a single instance.

It is also recognised that some of the findings may be artefacts of the organisations involved in the study, hence reducing potential generalisability (Finegan 2000). Indeed, it has also been suggested that organisational constraints often limit research design thus impacting on the nature of results (Tannenbaum and Yukl 1992); a problem encountered in this project. In particular, it should be noted that in stage three the model was tested using two non-LIP organisations, a factor that was found to be influential on employee perceptions in part one through its impact on organisational policy and communication. The problem of differential organisational policies and subsequent lack of generalisability of results has been noted by others (Noe and Wilk 1993). Testing the model within LIP companies or companies that have invested in WBL may lead to a reduction in the importance of perceptions of the organisation in understanding satisfaction and confidence in WBL and strengthen the importance of individual variables as proposed by the Reid and Barrington (1997) model. However, the level of agreement across samples using different organisations at least demonstrates the recurrence of patterns of findings between organisations.

Within stages two and three of this study participants completed measures using the same response format, that is, a questionnaire was used to assess the model variables. Common method variance is thus a potential problem, where use of the same response format is likely to inflate correlations amongst variables as participants are likely to apply the same biases to all tasks (Maurer and Tarulli 1994, Finegan 2000). Therefore, caution should be adopted in interpreting the
results of the correlational analyses. However, confidence in the results can be gained through the general agreement between the results from stages two and three and those from stage one (which used a different investigatory format, that is, interviews and focus groups), and the level of agreement between the findings from this study and those from others (Maurer and Tarulli 1994). In future studies validity of questionnaire results can be increased through use of a multitrait-multimethod matrix (Campbell and Fiske 1959) for determining discriminant and convergent validity (Neale and Liebert 1986). Where two processes are measured by two different methods. Convergent validity is obtained when values of the correlation between two different methods of assessing the same process are high. Discriminant validity is evaluated through two considerations. Firstly, the convergent validity coefficient for a measure should be higher that the correlation between that measure and any other having neither method nor process in common. Secondly, different measures of the same process should correlate more highly than measurements of different processes obtained by the same method.

Thus it is recognised that there are a number of methodological limitations to this study, although confidence in the results can be gained through the level of agreement between project stages, with the findings from other research studies and with motivational theories. There is, however, scope for development of this model in the future and this is discussed in the next section.

7.4  FUTURE MODEL DEVELOPMENT

This project developed a model of the WBL-motivation process from an employee perspective. This decision was based on the assumptions that individual learning forms the first building block in the route to successful organisational learning (Senge 1990, Argyris 1999), and that, more fundamentally, individual motivation underpins individual learning (McCombs 1991, Noe and Wilk 1993). Organisational motivational perspectives offered another route for model development that could be pursued in future research, as indicated below. Secondly, it was also decided to focus on employee reactions to WBL, namely, their satisfaction with the system, as this was clearly very significant to the individuals concerned. The dynamics of behaviour and performance again offer another route for model development and as such represent opportunities for future research, as indicated below. Throughout this discussion a number of future avenues for research have been highlighted both from a theoretical and a methodological standpoint. However, in terms of future development of this model three strands of research have been identified.
Model development within this project used the appropriate exploratory techniques for the development and testing of model factors and inter-factor dynamics. Future research should seek to use confirmatory techniques such as Structural Equational Modelling to further test the model, the principal aim of such techniques being to confirm and test developed models; they should not be used as exploratory techniques in model development (Tabachnick and Fidell 1996). In addition, other techniques that facilitate the detection and investigation of non-linear relationships, such as Bayesian Neural Networks may also be considered (Somers 2001).

This project developed the model of the WBL-motivation process with a focus on employee reactions to the WBL system (i.e. satisfaction), the project did not explore the behaviour/performance and learning outcomes elements of the original framework. Thus future model development should seek to explore these areas, particularly as contemporary research indicates that model factors (e.g. valence, instrumentality and organisational support) may have an important role to play in promoting participation in development activities (Tharenou 2001). Participation in a specific learning opportunity could be monitored to allow a focus on the relationships between motivational factors within the model and the elements of search strategies, behaviour, performance and learning outcomes. This may also provide an opportunity for focusing on aspects of practising of new skills. Indeed, Tannenbaum and Yukl (1992) have stressed the importance of opportunities to use training, and that the application and practice of skills is an important element worthy of further attention. A future research step beyond the exploration of behavioural and learning outcomes of the model may focus on assessing the predictive qualities of the model. For example, future research might seek to identify factors that discriminate between low and high participation in WBL. Furthermore, WBL goal acceptance was included in the model as it was indicated as important by employees and is traditionally viewed as being related to satisfaction. However, future model development should certainly include goal commitment that may have an important relationship with performance (Renn et al 1999). Furthermore, as early as 1975, Oldham found a significant relationship between the meaningfulness of a goal (akin to aspects of goal acceptance) and goal commitment (intention to work at a goal and intention to complete a goal).

Furthermore, this model is focused at a micro level on individual motivation, but WBL takes place in a broader context. Thus there is the need to develop the model from the organisational
perspective in the WBL-motivation process, providing further opportunities for identifying congruence and dissonance between employer and employee perspectives highlighted in the first stage of this project. Furthermore, Kirkpatrick (1987) recognises the need to understand the ultimate impact of development activities on overall organisational productivity. Thus development of a macro model may be warranted to more clearly understand the wider-scale forces that may ultimately impact on the individual within an organisation. Macro models of development activities may emphasise the impact that wider issues such as HR investment, customer satisfaction and business productivity may have on individual and organisational development (Al-Khayyat and Elgamal 1997).

7.5 SUMMARY

This study takes place within the wider context of Lifelong Learning (LLL), which has had a high priority throughout Europe for a number of years. LLL emphasises the continual nature of learning and development throughout an individual's life. Central to the success of LLL is WBL, which is proposed as being a key resource enabling both employers and employees to cope with change within the dynamic climate that characterises modern business. WBL promotes the flexibility and adaptability necessary for increasing competitiveness and boosting learning organisation evolution (UK Government 1996, Green and Owen 1992, Sloman 1993, Kemp and Seagraves 1995, Pedler et al 1997).

Central to the success of WBL is empowerment of the individual (Pedler et al 1997). Individuals must be able to take an active role in learning for it to be successful (Becker and Dwyer 1994); individuals need to be 'practitioners' rather than learning about practice (Brown and Duguid 1991). More fundamentally, individual motivation underpins this process, promoting successful individual learning and subsequently organisational learning (McCombs 1991, Noe and Wilk 1993, Argyris 1999). Despite the recognition of the importance of motivation in WBL in national policy papers (e.g. UK Government 1996), there is little in-depth research into motivation and WBL. This study has sought to develop a holistic model of the WBL-motivation process, highlighting salient factors and exploring inter-factor relationships within the motivation process to further understanding of this complex issue. This study has developed a micro model of employee perspectives of the WBL-motivation process.
The major contribution to theory of this study is the micro model that both emphasises the salient factors in the WBL-motivation process from the employee perspective and also explores the inter-factor relationships, and thus has moved towards a comprehensive definition and understanding of motivation in WBL. The model aids understanding of the context within which WBL is meaningful to employees, particularly with reference to individual valued outcomes and organisational goals, the importance of which has been stressed by Locke and Latham (1990). Most importantly, the model indicates that not only individual perceptions of the value and instrumentality of WBL but also individual perceptions of an organisation's approach to WBL are influential in satisfaction. This emphasises that an organisation has an important role to play in facilitating individual motivation in WBL. In particular, the effect of employee perceived dissonance between an individual's stance on WBL and the organisation's stance on learning is twofold; it can dampen motivation to invest energy in WBL at a particular time point and it can potentially greatly affect motivation to engage in future WBL (through reducing the perceived instrumentality of WBL). In addition, individuals emphasised the important facilitative role that an organisation plays in WBL, including a demonstration of commitment to all forms of WBL and provision of appropriate support.

In addition, this model emphasises that satisfaction is a key outcome for employees, important as an 'end' to the cycle of motivation, a point emphasised by Locke (1991). These findings are consistent with Noe and Schmitt (1986), Noe and Wilk (1993), Maurer and Tarulli (1994) and Tharenou (2001) who suggest that the nature of the environment is important in learning, particularly the provision of appropriate support, a clear development strategy and flexibility.

In terms of contribution to practice, the micro model developed can heighten both employee and employer awareness of employee perspectives of WBL, which can be used to inform WBL practice and aid development of WBL. On a general note, this model emphasises that organisations should focus on the image that they are portraying to employees as this can have an important influence on employee satisfaction with the WBL system. In particular, this project would advocate the development of employer-employee WBL partnerships that aim to reduce perceived dissonance between employer and employee and promote the organisation as a facilitator of WBL rather than a dictator. An employee perception of employer-employee dissonance in relation to WBL was clearly an important issue, with potentially devastating effects on the WBL-motivation process. By working in partnership employers can enhance their image as a champion of WBL, underline their commitment to WBL and employers and employees can improve their understanding of one
another's perspectives. Such partnerships adopting two-way communications between employers and employees can help to establish strategies for the promotion of WBL that are successful within the work context.

Specific issues were also highlighted as worthy of attention in the practice of WBL. Organisations need to promote WBL as a continuous process and emphasise the importance of employee responsibility for learning. There may be a need for cultural change within the organisation in particular ensuring that the value of WBL is promoted throughout the organisation. To this end, actions within the organisation must demonstrate organisational value and commitment to WBL, which may also demand management development to be reviewed. Organisations need to establish the relevance and utility of WBL, linking WBL to real (and valued) work development outcomes and emphasising the instrumentality of WBL in achieving these outcomes (and that organisations will recognise that employees are actively developing). Organisations may need to challenge their own biases in WBL and ensure that this is not negatively influencing their approach to WBL. A revamp of existing appraisal systems may be warranted in order to develop WBL goal setting procedures. Evaluation of WBL often signals the importance of WBL to employees and increases their confidence in WBL. Consideration of existing evaluation systems may be warranted, where strategies for evaluation may be quite different depending on the degree of formality/informality inherent in the mode of WBL. Such factors identified here as important in the practice of WBL are consistent with the key characteristics of successful LLL in the workplace suggested by Paxton (1976), Sloman (1993), Pedler et al (1997) and IIP UK (1997), namely: structured goal setting processes based on consultation; high commitment from employer; supportive environment; a culture of development; management development; evaluation; link to a quality standard such as IIP.

The contributions of this project to methodology are twofold. Firstly, this project has identified and defined the indicators needed to assess motivation within the WBL context. Thus providing an idea of the scope of factors that need to be accounted for in the WBL-motivation process. Secondly, this project has constructed and piloted a questionnaire for the assessment of motivation within the WBL context. This questionnaire is both useful for research purposes in future assessment of the model and also for pragmatic purposes as an aid to organisations to assess their strengths and weaknesses in the current WBL system as a basis for future development. Furthermore, the
development of this questionnaire has emphasised the need to assess both needs and values together in an instrumentality chain rather than as separate entities.

To conclude a micro-model of employee motivational perspectives in WBL has been developed by this study, which has made a significant contribution to theory, practice and methodology. This model highlights the complex dynamics of the WBL-motivation process and aids identification of the reasons why motivation may be hindered within WBL. Thus, it also indicates where WBL strategies may need to be developed that stimulate motivation and participation in WBL. In particular, the issue of employee perceptions of employer-employee dissonance in terms of WBL has been implicated as very influential in the WBL-motivation process. On a pragmatic level, employer-employee partnerships are advocated that enhance employer-employee congruence in relation to WBL and highlight areas that need to be enhanced in organisational WBL policy and practice. By taking note of these implications organisations and employees can work towards ultimately increasing employer-employee satisfaction with WBL with concomitant effects on motivation to engage in future WBL.

Future model development should focus on three strands of research. Firstly, use of confirmatory techniques to further test the model and exploration of non-linear relationships. Secondly, exploring the effect of motivational factors on WBL behaviour, performance and learning outcomes. Thirdly, the development of a macro model that incorporates the organisational perspectives in the WBL-motivation process and demonstrates the impact of wider forces on individual and organisational development. Such research will build on the current findings to promote an even better understanding of the complex dynamics of the WBL-motivation process and enhance strategies for the promotion of WBL.
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APPENDIX 1

SEMI-STRUCTURED INTERVIEW SCHEDULE
Semi-Structured Interview Schedule

The following semi-structured interview schedule was used in stage one of the project in interviews with training managers. It should be noted that flexibility within the interview was maintained and questions may not have been asked in the same order.

1. What is this organisation's definition of work-based learning?
   
   - How does the organisation distinguish in its definition between formal and informal WBL?
   
   - What opportunities exist for formal/informal work-based learning within this organisation? (please give 5 examples of each)

2. Please briefly describe the training policy of this organisation
   
   - How does this training policy relate to the organisation's business objectives?
   
   - What is the organisation's attitude to formal/informal WBL?
     
     - How important does the organisation view formal/informal WBL?
   
   - What are the benefits of formal/informal WBL?
     
     - To this organisation?
     
     - To employees of this organisation?
   
   - How is this organisation's training policy communicated to the employees?
     
     - How is the link between the organisation's training policy and its business objectives communicated to employees?

3. How does the organisation evaluate the training needs of the company/ the individual employee?
Appendix 1

- What, if any, are the differences between the WBL needs of the organisation and those of the employee?
- How are the organisation's needs and those of the employee incorporated into the same training policy?
- What input do employees have into the identification of WBL needs?
  - What is the organisation's attitude towards involving the employee in the identification of WBL needs?
  - How adequate is the current system for evaluating the WBL needs of the organisation and employee alike?
    - What difficulties are there in evaluating WBL needs?

4. How does the organisation implement its training policy?

- What particular WBL goals are set by the organisation?
- How are the available formal/informal WBL opportunities communicated to employees?
- How are employees encouraged to participate in formal/informal WBL?
- What are the levels of uptake of these formal/informal opportunities by employees?
- How are individual employees selected to go on formal courses?
- How much choice do employees have in their level of participation in formal and informal WBL?

5. What formal/informal support is available within the organisation to aid participation and progression of employees through WBL?

- Are these supports adequate?
  - If yes: Which of the supports seems to have been particularly successful?
  - If no: For what reasons are these supports inadequate?
1. What obstacles are there to the implementation and uptake of WBL opportunities?
   - For this organisation?
   - For the employees within this organisation?

2. How does the organisation measure the effectiveness of formal/ informal WBL?
   - How adequate has the organisation found this evaluation system?
   - How does the organisation exploit the information gained through WBL?

3. Overall how does the organisation view its current training policy?
   - Does it feel it has particular strengths / weaknesses?

4. How do you feel the employees view the organisation's training policy?

5. Is there anything that you would like to add?

   Thank you for taking part in this interview.
APPENDIX 2

PERSONAL PROFILE QUESTIONNAIRES
Stage One

The following personal profile questionnaire was utilised in stage one of the study.
PERSONAL PROFILE QUESTIONNAIRE

Thank you for taking the time to complete this questionnaire. Please complete each question by either putting your answer in the space provided or circling the appropriate response. All your responses are confidential and will only be used for the purposes of this research. If you have any queries about any of the questions then please ask the researcher.

PART 1

Name: ________________________________

Gender: Male Female

Marital Status: Single Married Separated/ Divorced Widowed

Age: 18-24 25-34 35-44 45-54 55+

Occupation: ________________________________

Place of work: ________________________________

Length of time with company (yrs): ________________________________

Salary (£): upto 10,000 10,001 to 15,000 15,001 to 20,000 20,001 to 25,000 above 25,000

What age did you leave formal (school/ college) education (years): ____________

Please indicate what level of qualifications you hold in the following areas: (You do not need to state the subject area)

Academic qualifications (CSE, A-level, BA etc.): ________________________________

Vocational qualifications (NVQ etc.): ________________________________

Professional qualifications or membership of professional body (state full name): ________________________________

Thank you for taking the time to complete this questionnaire

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Stage Three

The following personal profile questionnaire was utilised in stage three of the project. Please note the following example was distributed amongst employees in organisation 2. When distributed amongst organisation 1 employees the relevant grading structure for organisation 1 was substituted where appropriate. Appropriate departmental information was also obtained for each participant; this information is omitted to protect organisational anonymity.
Section 1: About You — A Personal Profile

This section aims to collect a few details about you.

Please complete each question in this section by either putting your answer in the space provided or circling the appropriate response. All responses are confidential and anonymous.
Gender: Male Female

Marital Status: Single Married/ Living with Partner Separated/ Divorced Widowed

Age: under 18 18-24 25-34 35-44 45-54 55+

Grade in which your current position falls:

Grade 5-7, SEO or equivalent HEO or equivalent, EO or equivalent PA or equivalent, AO, AA or equivalent
Any Other please specify ____________________________

Does your job involve responsibility for any staff development? (excluding your own development)
Yes No

Length of time with company (yrs): ____________________________

What age did you leave formal, full-time (school/ college) education: ____________________________

Please indicate the highest level of academic qualifications that you hold:

CSE, O-level or GCSE A-level or equivalent HNC, HND or equivalent BA or BSc
MA, MSc or MBA PhD Other please specify ____________________________

Please state what level of vocational qualifications (e.g., NVQ, City and Guilds etc.) you hold: (please DO NOT state the subject area)

Please state what professional qualifications you hold or your membership of a professional body (state full name):

Thank you for taking the time to complete this questionnaire

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APPENDIX 3

LDQ ATTITUDES AND EMOTIONS SCALE
Appendix 3

A3

LDQ Attitudes and Emotions Scale

The following form of the LDQ Attitudes and Emotions Scale (Honey and Mumford 1990) was used in stage three of the project.

Three questionnaires were presented to participants in stage three: personal profile; LDQ Attitudes and Emotions Scale; WBL-Motivation Questionnaire. All three were presented as one questionnaire, although they are in separate appendices for ease of reference. However, the front sheet is included here for information.
Learning in Your Organisation

Thank you for taking the time to complete this questionnaire. There are three sections for you to complete:

- Section 1: About your approach to learning
- Section 2: About learning in your organisation (appendix 6)
- Section 3: About you: A personal profile (appendix 2)

Please read and follow the instructions for each section carefully.

All responses are confidential and will only be used for the purposes of this research.
Section 1: your Approach to Learning

ABOUT THIS SECTION

This part of the questionnaire is about YOU and how you approach learning in general.

INSTRUCTIONS

There are 17-paired items - All you have to do is read each pair of statements and tick (✓) the box beside the statement that most closely applies to you. If both statements in a pair apply, then tick the one that most applies to you however small the difference.

When an item is about your organisation, respond to it for your part of the organisation rather than the whole of it.

All responses are confidential and will only be used for the purposes of this research.

© Honey and Mumford 1990
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<th></th>
<th>I believe that my boss is mainly responsible for my development</th>
<th>I believe that I am mainly responsible for my own development</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>I'm the sort of person who often volunteers to do things</td>
<td>I believe you should think twice before volunteering to do things</td>
</tr>
<tr>
<td>3</td>
<td>I believe that the effort you put into something and the benefits you gain are not necessarily associated</td>
<td>I believe that the more you put into something the more you get out of it</td>
</tr>
<tr>
<td>4</td>
<td>When things are going well I tend to leave them alone</td>
<td>When things are going well I look for ways to get them to go even better</td>
</tr>
<tr>
<td>5</td>
<td>I believe that the older you get the more you become set in your ways</td>
<td>I believe that you are never too old to learn</td>
</tr>
<tr>
<td>6</td>
<td>When someone criticises me I feel curious</td>
<td>When someone criticises me I feel embarrassed and/or say something self-depreciating like ‘it was nothing really’</td>
</tr>
<tr>
<td>7</td>
<td>When I am uncertain what to do for the best to solve a problem or handle a situation, I feel so uneasy that I'm compelled to find an answer quickly</td>
<td>When I am uncertain what to do for the best to solve a problem or handle a situation, I like to explore alternatives and weigh up the pros and cons of each before deciding what to do</td>
</tr>
<tr>
<td>8</td>
<td>When I meet strangers I feel confident and adequate</td>
<td>When I meet strangers I feel unsure and inadequate</td>
</tr>
<tr>
<td>9</td>
<td>When things keep changing, any feelings of excitement are outweighed by my feelings of insecurity</td>
<td>When things keep changing, my feelings of apprehension are outweighed by my feelings of excitement</td>
</tr>
</tbody>
</table>

Please Note
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<table>
<thead>
<tr>
<th></th>
<th>I feel anxious and worried about being tested</th>
<th>I feel ambivalent about being tested; on the one hand I feel apprehensive and on the other I feel stimulated and challenged</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>When I'm stuck with people who bore me I become lethargic and look for an early escape</td>
<td>When I'm stuck with people who bore me I become determined to find something interesting about them</td>
</tr>
<tr>
<td>16</td>
<td>I tend to thrive in situations where there are few boundaries</td>
<td>I tend to thrive in situations where I've plenty of room for manoeuvre</td>
</tr>
</tbody>
</table>

Please Note

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Thank you for completing this section of the questionnaire

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Focus Groups Schedule - Employees

The following focus groups schedule was used in stage one with employee participants. Flexibility was maintained throughout, therefore, some questions may not have been asked in the order shown and additional questions may have been utilised.

Introduction

My name is Debbie Keeling from the University of Wales Institute, Cardiff. Thank you all for participating in this group. I am going to ask you a number of questions that I would like you to discuss with each other and tape record your answers - all your responses will be confidential - only I will know who has actually said what. Before we begin would you please complete these questionnaires, which ask details about yourselves.

1) Definition

- How would you define work-based learning?
  * How would you distinguish between formal and informal WBL?

2) Availability and Recognition of Learning Opportunities

- What opportunities exist for formal/informal work-based learning in:
  * the workplace;
  * externally?

- (*Exercise) How often are you involved in such formal/informal work-based learning opportunities?
  * give examples (*ask individuals to note down their own examples of what they are interested in)?

5) Attitudes to Learning; Valence of Education; Expectations of Education

- What is your attitude towards work-based learning?

- Is work-based learning important to you?
  * If yes: In what ways is work-based learning important?
  * If no: Why is work-based learning not important?

- Why do you need to take advantage of work-based learning opportunities?
Appendix 4

- What expectations do you have of work-based learning when you take part in an opportunity at work?
  - How does this affect your uptake of WBL opportunities?
- How did you get involved in WBL?
  If appropriate:
  - Why did you decide to participate in informal / formal WBL opportunities?
  - Why have you chosen not to go on others that are available?
  - How does the voluntary or compulsory nature affect your view of the work-based learning opportunity that you are involved in?

3) Assessment of Need

- How are your work-based learning needs identified:
  - within the organisation? (appraisal system?)
  - by you?
- Do you have a personal development plan?
  - Is this developed by the company or yourselves or both?
- What problems, if any, are there with the methods of identification of learning needs used?
  - Prompt: Are learning need adequately met?

4) The Learning Environment

- What formal/ informal support is/was available to aid your participation and progression through work-based learning?
  - Prompt: What encouragement is given to you and by whom?
- Are/ were these supports adequate?
  - If yes: Which supports were more relevant/appropriate and why?
  - If no: Why are these supports not adequate?
- What obstacles are/were there to your taking a work-based learning opportunity?
- What, if any, factors have contributed to you not completing a work-based learning opportunity?
- What is the attitude of your peers to your involvement in work-based learning?
What is the attitude of your line manager to your involvement in work-based learning?

6) Work-Based Learning and Business Objectives

• What is the official training policy of this organisation as understood by you?

• How do you feel the formal/ informal work-based learning opportunities offered by the organisation relate to this official training policy?

• How can your involvement in formal/ informal work-based learning opportunities enhance the business objectives set by the company?
  • Does this link encourage you to take part in work-based learning?

• How does the employer measure the effectiveness of formal/ informal work-based learning?

• What is your reaction or attitude towards the way that the employer measures the effectiveness of work-based learning opportunities in relation to business objectives?

• Would any of you like to add anything?

Thank you for taking part in this focus group
APPENDIX 5

EMPLOYEE PERSPECTIVES IN WORK-BASED LEARNING: A DRAFT RESEARCH PROTOCOL
Employee Perspectives in Work-Based Learning: A Draft Research Protocol

The establishment of 1996 as the 'European Year of Lifelong Learning' has highlighted the importance of education and training throughout an individual's life - not only to enhance an individual's personal development but in a wider context contributing to economic stability and growth throughout Europe and the promotion of innovation in industry. Work-based learning is an important aspect of this enterprise, providing employees and employers with the opportunity to develop new and existing skills and implement new processes that benefit individuals and companies alike. If work-based learning is to be successfully exploited as a developmental resource then the processes that affect the uptake and outcome of such learning opportunities must be explored. This research project will focus on employee's perspectives of work-based learning, including the perceived importance and reported uptake of such opportunities. This protocol briefly describes the first stage of this project which is based around specific case-studies of organisations within the financial sector.

Procedure

The focus group interviewing technique will be adopted, which provides a greater depth of information about a topic through promotion of group discussion and hence the generation of ideas that otherwise may be omitted in a one-to-one interview. It is proposed that 2 focus groups are conducted each consisting of 4-6 people of the same grade within an organisation.

Focus groups will be held either at UWIC or on company premises at the convenience of employer and employees and will last for one and a half hours. Participants will be invited through a series of open-ended questions and a closed-item questionnaire to give their perspectives on work-based learning opportunities. At the beginning of each focus group participants will be asked to complete a short questionnaire about themselves (please find copy attached). All interviews will be tape-recorded with the agreement of participants and confidentiality maintained at all times. In addition, it is proposed to discuss this issue in the form of a tape-recorded, individual interview with the 'Training Manager' or the individual responsible for organising training within the organisation.
Research Outcomes

Following analysis of focus group interviews this project will provide a deeper understanding of employees' perspectives of work-based learning and an insight into the issues which may influence their decision to participate in such opportunities. This project, therefore, aims to identify the major factors that may contribute to the success of work-based learning, including employees':

- attitudes to work-based learning in general;
- motives for participation or non-participation in work-based learning;
- perception of the impact that participation in work-based learning has had on them.

Identification and exploration of the relationships between these issues will have important implications for future uptake and success of work-based learning. In addition, the factors identified in the focus groups with employees will be used as a basis for comparison with employer approaches to work-based learning gained through the individual structured interview.
APPENDIX 6

MOTIVATION QUESTIONNAIRE
Motivation Questionnaire

The following example of the motivation questionnaire contains the final questions used in stage three of the project. The questionnaire underwent a number of modifications described in chapter three; the factor analytical stage of questionnaire development is described in chapter five. In order to counter order effects the items within this questionnaire were presented in several different orders, for ease of reference the items are presented in the same order as they were following the same sequence as chapter 5).

This questionnaire was presented as a package with two other measures (appendix 2 and appendix 3), but is presented separately for ease of reference. The instruction sheet as presented to participants is included.

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Section 2: Learning in Your Organisation

ABOUT THIS SECTION
The following statements are about learning in your place of work.

INSTRUCTIONS
Please read each statement carefully and indicate on the scale provided how strongly YOU agree or disagree with each statement by ticking (√) the appropriate box.

When an item is about your organisation, respond to it for your part of the organisation rather than the whole of it.

There are no right or wrong answers - Please state what YOU feel.

DEFINITION:
Learning refers to all types of learning. Formal learning may, for example, represent 'structured' in-house or external courses that lead to a specific outcome (skill) or even a qualification, often within a recognised time limit. Informal learning is 'less structured' and may range from mentoring and job swaps to learning from everyday experiences, and may not be time constrained.

All responses are confidential - and will only be used for the purposes of this research.
1. Learning in the workplace is needed as it helps me to develop my existing efficiency and effectiveness at work

2. Learning at work is essential for me to keep up-to-date with the inevitable changes in the products and services that this organisation provides

3. To survive in the workplace I need to keep actively learning at work

4. Learning at work is essential for me to keep up-to-date with developments in the technology used by this organisation

5. There is definitely a need for learning in the workplace to develop my knowledge and practical skills

6. Learning at work is needed for me to become multi-skilled – able to handle a variety of jobs and inquiries in the workplace

7. Learning at work is needed to promote my self-confidence

8. Learning in the workplace is needed to increase the number of contacts that I have with other people whether inside or outside the organisation

9. There is a need for learning at work to enhance my morale in the workplace

10. Learning at work is needed to increase my earning potential

11. There is a need for me to participate in learning in the workplace to enhance my career prospects whether inside or outside this organisation

Please Note
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<tr>
<th></th>
<th>Strongly Agree</th>
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<th>Strongly Disagree</th>
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<tr>
<td>12. Whenever I take part (or have taken part) in formal learning I find that at least some, if not all, of it is valuable to me in some way</td>
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<td>13. Formal learning is valuable for gaining technical or theoretical knowledge about my job</td>
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<td>14. Formal learning has real relevance to the knowledge and skills that I need to do my job</td>
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<td>15. Informal learning opportunities (e.g. everyday experiences, job swaps) are relevant to the knowledge and practical skills that I need to do my specific job</td>
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<td>16. Informal learning opportunities are valuable because it shows how my work is relevant to an individual's job</td>
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<td>17. Commitment to learning/development is demonstrated by top-level management actively taking part in learning</td>
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<td>18. Commitment to learning/development is demonstrated by the organisation continually reviewing and updating learning/development opportunities</td>
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<td>19. Commitment to learning/development is demonstrated by investment of time, finances and expertise in learning/development opportunities</td>
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<td>20. This organisation understands how investing in people's learning/development can be valuable for boosting an individual's morale</td>
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Appendix 6

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<tr>
<td>22. This organisation understands how investing in people's learning/development can be valuable for enhancing an individual's skills</td>
<td></td>
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<td>23. Top level management are committed to offering learning and development opportunities to employees of all ages</td>
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<td>24. Top level management are committed to offering learning and development opportunities to part-time employees of the organisation</td>
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<tr>
<td>25. Top level management are committed to offering learning and development opportunities to full-time employees of the organisation</td>
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<tr>
<td>26. This organisation recognises the potential for learning and developing through formal training opportunities (such as formal courses)</td>
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<tr>
<td>27. This organisation recognises the potential for learning and developing from informal learning opportunities (such as learning from experience)</td>
<td></td>
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<tr>
<td>28. My personal development needs are fully understood by my line manager</td>
<td></td>
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<tr>
<td>29. My personal development needs are fully understood by top-level management</td>
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<tr>
<td>30. The practical skills and knowledge that I need to do my particular job are fully understood by my line manager</td>
<td></td>
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<tr>
<td>31. The practical skills and knowledge that I need to do my particular job are fully understood by top-level management</td>
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<td></td>
<td>Strongly Agree</td>
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<tr>
<td>32.</td>
<td>I feel that my learning needs are identified through a co-operative process between me and the person(s) responsible for my development</td>
<td></td>
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<tr>
<td>33.</td>
<td>If I have taken part in a learning opportunity (such as a course) the person responsible for my development discusses how I have benefited from it</td>
<td></td>
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<tr>
<td>34.</td>
<td>If I have participated in learning and developmental opportunities, someone is available to help me put my new skills and knowledge into practice at work</td>
<td></td>
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<tr>
<td>35.</td>
<td>In my organisation I feel that there is a systematic process for identifying my work development needs</td>
<td></td>
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<tr>
<td>36.</td>
<td>In my organisation I feel that there is a systematic process for identifying my personal development needs</td>
<td></td>
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<tr>
<td>37.</td>
<td>If I have taken part in a learning opportunity the person responsible for my development discusses how beneficial it could be to others in the organisation</td>
<td></td>
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<tr>
<td>38.</td>
<td>I understand how the organisation's approach to learning actually benefits me</td>
<td></td>
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<tr>
<td>39.</td>
<td>In my organisation when development needs are identified the necessary learning resources to meet those needs are specifically identified (e.g. a formal course or internal mentor)</td>
<td></td>
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<tr>
<td>40.</td>
<td>I understand how the organisation's approach to learning actually benefits this organisation</td>
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<tr>
<th></th>
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<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</thead>
<tbody>
<tr>
<td>41. Whenever I take on new or extra duties at work my manager/supervisor discusses with me whether I need additional job-related skills or knowledge</td>
<td></td>
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<tr>
<td>42. This organisation makes sure that it promotes a wide range of formal learning opportunities (e.g. courses)</td>
<td></td>
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<tr>
<td>43. I understand how I can help achieve the organisation's learning objectives</td>
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<tr>
<td>44. I could explain to someone who does not work here what the organisation's approach to learning is</td>
<td></td>
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<tr>
<td>45. I could explain to someone who does not work here what the organisation's learning objectives are</td>
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<tr>
<td>46. I could explain to someone who does not work here what the organisation's overall objectives are</td>
<td></td>
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<tr>
<td>47. If I have a problem and/or make mistakes, it's OK because my manager/supervisor helps me to identify what went wrong and how to solve the problem</td>
<td></td>
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<tr>
<td>48. My manager/supervisor discusses with me what specific learning and development goals I need to concentrate on</td>
<td></td>
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<tr>
<td>49. In my place of work, I know who to talk to to provide me with advice about the learning and developmental opportunities open to me</td>
<td></td>
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<tr>
<td>50. My manager/supervisor encourages me to aim for challenging development and learning targets</td>
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### Appendix 6

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<th>Disagree</th>
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<tbody>
<tr>
<td>51.</td>
<td>My manager/supervisor often gives me feedback about how I am developing, in addition to the formal appraisal process</td>
<td></td>
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<tr>
<td>52.</td>
<td>Whenever I take on new or extra duties at work my manager/supervisor discusses with me whether I need to address any personal development issues</td>
<td></td>
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<td>53.</td>
<td>In my organisation people are encouraged to make decisions about learning and development on their own initiative without seeking 'permission'</td>
<td></td>
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<tr>
<td>54.</td>
<td>This organisation endorses its 'top-down, bottom-up' approach to learning and development goals, that both job-related and individual-related needs are identified and development needs are made available (whether internally or externally)</td>
<td></td>
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<td>55.</td>
<td>My organisation enables people to experiment and try different ways of doing things to aid their learning and development</td>
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<td>56.</td>
<td>In my organisation when development needs are identified the resources that have been identified are actually made available (whether internally or externally)</td>
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<td>57.</td>
<td>In my organisation I have a choice about whether I want to take a learning opportunity or not, nothing is forced on me</td>
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<td>58.</td>
<td>This organisation makes sure that they promote a wide range of informal learning opportunities (e.g. one to one training, learning from experience)</td>
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<td>59.</td>
<td>I feel confident that this organisation will continue to develop and update their learning and development systems</td>
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<tr>
<td><strong>60.</strong> The learning and developmental opportunities offered to me by this organisation make me feel really valued by the organisation</td>
<td></td>
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<td><strong>61.</strong> The learning and developmental opportunities offered to me by this organisation boost my morale and generally make me feel happy at work</td>
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<td><strong>62.</strong> I feel that the system that this organisation uses to promote learning has/will be successful for achieving the organisation's development</td>
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<td><strong>63.</strong> I am encouraged to participate in learning and developmental opportunities, both formally and informally by the organisation because of the potential benefits to myself.</td>
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<td><strong>64.</strong> I feel that this organisation makes the most out of its available learning and developmental resources</td>
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<td><strong>65.</strong> I feel that the system that this organisation uses to promote learning has/will be successful for achieving my own development</td>
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<td><strong>66.</strong> I look forward to going to work because the learning and developmental opportunities make the environment more dynamic and challenging</td>
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<td><strong>67.</strong> I feel that I can achieve the learning goals that have been set for me within this organisation (e.g. in a learning pathway or personal development plan)</td>
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<td><strong>68.</strong> My learning and development goals are realistic</td>
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</tr>
<tr>
<td><strong>69.</strong> I feel that my learning goals are focused and detail the specific learning objectives that I should try to meet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please Note
This questionnaire is not to be used or photocopied without permission of the authors.
70. The learning goals that have been identified for me at work (e.g. in a learning pathway or personal development plan) are relevant to my developmental needs

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

Thank you for completing this section of the questionnaire

Please Note
This questionnaire is not to used or photocopied without permission of the authors
APPENDIX 7

COVERING LETTER
Covering letter

This covering letter was sent to one of the organisations in stage three of the project. It is similar in nature to that sent to the second organisation.

INTERNAL MEMORANDUM

TO: ALL STAFF
FROM: CHIEF EXECUTIVE
REFERENCE:
DATE: 10/07/98

TRAINING PLAN

You will be aware that I and the other members of ABC are strongly committed to improving staff development and training within the X. AB has been reviewing this area and he will be consulting on proposals in the early autumn.

To find out more about your current views on training, we have asked staff at the University of Wales Institute, Cardiff (UWIC) to carry out a survey on our behalf. This will help ensure that AB’s proposals address as many concerns as possible. It will also provide a benchmark against which we can show progress in the future.

I would be grateful, therefore, if you could complete the attaché questionnaire and return in the stamped addressed envelope provided direct to Debbie Keeling as UWIC by Friday 31 July 1998. No questionnaires will be seen by anyone in X and results will be presented in aggregate form.

I would urge you to take this opportunity to forward your views as this is a vitally important area for X.

If you have any queries about the questionnaire, you should contact CD or AB.
APPENDIX 8

PCA DATA CHECKS
This appendix contains details of data screening for initial PCA of motivation questionnaire for stage 2 of the research.

**DATA ENTRY ERRORS AND MISSING DATA SCREENING**

Each item in the “motivation” questionnaire was screened for data entry errors and missing data. Some data entry errors were identified and rectified.

Upon examination of missing data, two respondents (cases 58 and 77) were identified as accounting for a high percentage (57.38% representing 35 out of 61 missing responses) of all missing responses. Respondent one (case 58) was male, aged 25-34, social class grouping C1 and worked in the retail industry with his present organisation for 2 years. This respondent stated that he had missed out a number of questions as he found the questionnaire too lengthy. Respondent two (case 77) was female, aged 18-24, social class grouping C1 and worked in the public sector with her present organisation for 6 months. This respondent stated that as she was a new employee in the organisation she found questions regarding the organisation's approach to learning difficult to complete and hence missed out a large proportion of questions. As these two respondents accounted for a large number of missing responses they were deleted from all subsequent analyses, which is the recommended strategy in cases such as these (Tabachnick and Fidell 1989). However, the difficulty in completing responses due to the limited length of employment by an organisation expressed by respondent two is noted as a potentially important factor in overall response patterns and this will be monitored accordingly in the main stage of the research.

The other 42.62% of missing data (26 out of 61 missing responses) were scattered randomly through the data matrix, and no particular question had a high percentage of missing responses. This suggests that the missing values will pose no serious problems in the data analysis (Tabachnick and Fidell 1989). Therefore, the remaining missing values were replaced with a mean score for the variable, as recommended (Tabachnick and Fidell 1989).

**OUTLIERS**

The data matrix was screened for univariate and multivariate outliers.
UNIVARIATE OUTLIERS

The data matrix was screened for univariate outliers via examination of the Z-scores for each questionnaire item. Outliers were defined as any Z-score above or below ± 3.00, as recommended (Tabachnick and Fidell 1989). Three univariate outliers (cases 81, 36 and 9) were identified on items Q16, Q18 and Q63, with Z-scores of -3.31594, -3.15895 and -3.80510 respectively. As there are only a few univariate outliers it is reasonable to examine them individually (Tabachnick and Fidell 1989).

However, one case 69 was identified as obtaining high Z-scores on a number of items (Q1, Q2, Q3, Q4, Q6, Q13 and Q15) ranging from -4.9916 to -3.05808. It is important to note that Q1 to Q6 represent part of the “Value Chain” Scale, and Q13 and Q15 represent items about formal WBL, which form part of the “WBL Instrumentality” Scale. Examination of individual item scores revealed that, as suggested by the negative Z-scores, this respondent scored very low on these 7 items indicating a negative attitude towards at least part of the two scales.

As recommended data entry was re-checked against original questionnaire responses for the outliers identified (Tabachnick and Fidell 1989) and data entry was found to be correct. It is not appropriate to simply delete the cases identified as they form an important part of the target audience, therefore, the distribution of each variable was checked for deviations from normality (Section 9.1.4).

MULTIVARIATE OUTLIERS

The data matrix was screened for multivariate outliers using the multiple regression function, where case number was used as a dummy dependent variable and all items in the questionnaire were the independent variable, as recommended (Tabachnick and Fidell 1989, Norusis 1992). Multivariate outliers are defined as those cases with standardised residual values greater than 3 in absolute value (Norusis 1992). The analysis revealed that there were no multivariate outliers, this supports the case for retention of case 69, as this respondent did not appear as a multivariate outlier (Tabachnick and Fidell 1996).

NORMALITY

The assumption of normality of the distribution of the variables enhances the PCA solution (Tabachnick and Fidell 1989). In order to assess normality the skewness and kurtosis values for each item in the questionnaire were examined.

The majority of skewness scores (98.92%) are between -2.0 and +2.0, of which 83.87% are between -1.0 and +1.0, and only one score is outside this range (Q1, skewness = -2.611), indicating that it is acceptable to continue with PCA (Muthen and Kaplan 1984). The majority (93.55%) of the kurtosis scores are between -2.0 and +2.0, of which 60.22% are between -1.0 and +1.0, again suggesting that PCA can be used (Muthen and Kaplan 1984). However, it should be
noted that 6.45% of the kurtosis scores are above +2.0 (Q1=10.79, Q2=5.033, Q3=2.556, Q4=5.314, Q6=3.643, Q13=3.928), although no values are below -2.0. It is worth highlighting that case 69 was identified previously (section 9.1.3) as having 'abnormal' scores on all of these questions and it is likely that this case is affecting the skewness and kurtosis scores. This is supported by a reduction in the skewness and kurtosis scores when they are recalculated with case 69 omitted. Although, it is important to retain this case, the high kurtosis and skewness scores will affect the quality of the PCA solutions, for scales with these items (Tabachnick and Fidell 1989). The scale in question is Value Chain.

**Factorability of the Data Matrix and Appropriateness of PCA**

The following hypothesised scales were subject to PCA:

1. Employee Recognition of WBL Valued Outcomes;
2. Employee Recognition of WBL Instrumentality;
3. Employee Perceptions of the Organisation in relation to WBL;
4. The Goal Setting Procedure;
5. Outcomes of the WBL Process.

As recommended the correlation matrices for the variables on each scale were examined to assess the factorability of the data matrices, identified through the magnitude and significance of the correlations (Tabachnick and Fidell 1989, Norusis 1992, Oppenheim 1992, Bryman and Cramer 1997). It is recommended that the data matrix be examined for the proportion of correlations over 0.3 in absolute value, at least some correlations over 0.3 in absolute value are required for PCA & FA to be suitable (Tabachnick and Fidell 1996). Furthermore, numerous pairs of significant (measured at 5% significance or less) correlations are also necessary (Tabachnick and Fidell 1996).

In addition, two tests were also conducted to assess the appropriateness of PCA with each of the six hypothesised scales (Tabachnick and Fidell 1989, Norusis 1992):

1. Kaiser's (1970, 1974) measure of sampling adequacy - Values of 0.6 and above are required for good PCA & FA (Tabachnick and Fidell 1996).
2. Bartlett's (1954) test of sphericity - tests the hypothesis that the correlations in the matrix are 0 - a significant test indicates that PCA & FA are suitable as the correlations in the matrix are not 0 (Tabachnick and Fidell 1996).
VALUED WBL OUTCOMES

The following correlation matrix was examined for correlations over 0.3.

<table>
<thead>
<tr>
<th></th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>1.00000</td>
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<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
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<td></td>
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<tr>
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<td>Q7</td>
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<td>0.28550</td>
<td>0.19417</td>
<td>0.27745</td>
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<td>0.32129</td>
<td>0.44283</td>
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<td>0.13958</td>
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<td>-0.02745</td>
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<td>0.07798</td>
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</table>

Table 1: Correlation matrix for valued WBL outcomes

In terms of appropriate correlations:

- 59% are above 0.3 in absolute value;
- 82% are significant.

Therefore, PCA is deemed appropriate. The two tests for the adequacy of PCA were undertaken:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.84557
- Bartlett Test of Sphericity = 472.86176, Significance = 0.00000

These indicate that PCA is appropriate for this data set.
INSTRUMENTALITY OF WBL

The following correlation matrix was examined:

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<thead>
<tr>
<th></th>
<th>Q13</th>
<th>Q14</th>
<th>Q15</th>
<th>Q16</th>
<th>Q17</th>
<th>Q18</th>
<th>Q19</th>
<th>Q20</th>
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</thead>
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</table>

Table 3: Correlation matrix for WBL Instrumentality

In terms of correlations:

- 25% are over 0.3 in absolute value, and 21% are close to 0.3 in absolute value;
- 64.29% are significant.

The two tests for adequacy of PCA were conducted:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.68535
- Bartlett Test of Sphericity = 212.32926, Significance = 0.00000

These results indicate that PCA is appropriate.
EMPLOYEE PERCEPTIONS OF THE ORGANISATION

The following correlation matrix was examined:

<table>
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<tr>
<th></th>
<th>Q21A</th>
<th>Q21B</th>
<th>Q22A</th>
<th>Q22B</th>
<th>Q27A</th>
<th>Q27B</th>
<th>Q30A</th>
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<tbody>
<tr>
<td>Q21B</td>
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<td></td>
</tr>
<tr>
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<td></td>
<td></td>
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</tr>
<tr>
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<td></td>
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</tr>
<tr>
<td>Q27A</td>
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<td>.21214</td>
<td>.04188</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Q30B</th>
<th>Q50A</th>
<th>Q50B</th>
<th>Q50C</th>
<th>Q50D</th>
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<td></td>
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</tbody>
</table>

Table 5: Correlation matrix for perceptions of organisation

In terms of correlations:

- 69.17% are over 0.3 in absolute value;
- 86.67% are significant.

The two tests for the adequacy of PCA were conducted:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.82128
- Bartlett Test of Sphericity = 1159.2022, Significance = 0.00000

These results indicate that PCA is suitable for the data set.
### WBL GOAL SETTING PROCEDURE

The following correlation matrix was examined:

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<tr>
<th></th>
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<th>Q25B</th>
<th>Q24A</th>
<th>Q24B</th>
<th>Q54</th>
<th>Q26</th>
<th>Q37B</th>
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</tr>
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In terms of correlations:

- 46.72% are over 0.3 in absolute value;
- 76.35% are significant.

The two tests for adequacy of PCA were conducted:

- **Kaiser-Meyer-Olkin Measure of Sampling Adequacy** = 0.74410
- **Bartlett Test of Sphericity** = 1886.2767, **Significance** = 0.00000

These results indicate that PCA is appropriate.
OUTCOMES OF THE WBL PROCESS

The following correlation matrix was examined:

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Table 9: Correlation matrix for outcomes of the WBL process

In terms of correlations:

- 62.12% were over 0.3 in absolute value;
- 78.79% were significant.

The two tests for adequacy of PCA were conducted:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.81397
- Bartlett Test of Sphericity = 681.74103, Significance = 0.00000

These results indicate that PCA is appropriate.
This appendix contains details of data screening for second AFA of motivation questionnaire for stage 2 of the research.

INITIAL DATA CHECKS

DATA ENTRY AND MISSING DATA SCREENING

All items on the questionnaire were screened for data entry errors and missing data. Some data entry errors were identified and rectified.

Upon examination of missing data, two respondents (cases 12 and 15) were identified as accounting for a high percentage of all missing responses (47.52%, representing 48 out of 101 missing responses). Both respondents were from organisation 1, male, aged 55+ and were in social class grouping D. Respondent 12 had worked for the organisation for six months; respondent 15 had worked for the organisation for 7 years. Both respondents stated that they found the questionnaire too lengthy to complete fully. As these two respondents accounted for a large number of the missing responses they were deleted from all subsequent analyses, which is the recommended strategy in cases such as these (Tabachnick and Fidell 1996). The remaining 52.48% of missing data (53 out of 101 missing responses) were scattered randomly throughout the data matrix, and no particular question had a high percentage of missing values. This suggests that the missing values will pose no serious problems in the data analysis; therefore, the remaining values were replaced with a mean score for the variable, as recommended (Tabachnick and Fidell 1996).

MULTIVARIATE OUTLIERS

The data matrix was screened for multivariate outliers using the multiple regression function where case number was used as a dummy dependent variable and all items in the questionnaire were the independent variables, as recommended (Norusis 1992). Multivariate outliers are defined as those cases with standardised residual values greater than 3 in absolute value (Norusis 1992). The analysis revealed that there were no multivariate outliers (standardised residuals ranging from -1.3138 to 1.4283).

NORMALITY

The assumption of normality of the distribution of variables enhances the AFA solution (Tabachnick and Fidell 1996). In order to assess normality the skewness and kurtosis scores for each item in the questionnaire were examined.
All the skewness scores were between -2.0 and +2.0, of which 86.84% were between -1.0 and +1.0, indicating that it is acceptable to continue with AFA (Muthen and Kaplan 1984). The majority (96%) of kurtosis scores were between -2.0 and +2.0, of which 75% were between -1.0 and +1.0, again suggesting that AFA can be used with confidence (Muthen and Kaplan 1984). However, it should be noted that three of the kurtosis scores were above +0.2 (Q7=2.6783, Q18=2.1234, Q20=2.7971), although no values were below -2.0. Although these scores are above the 0.2 threshold they are not large enough to cause significant problems but they may affect the quality of the AFA solution for scales with these items (Tabachnick and Fidell 1996).

**FACTORABILITY OF THE DATA MATRIX AND APPROPRIATENESS OF AFA**

The following hypothesised scales were subject to AFA:

1. Valued WBL Outcomes
2. Instrumentality of WBL
3. Employee Perceptions of the Organisation
4. WBL Goal Setting Processes
5. Outcomes of the WBL Process

As recommended the correlation matrices for the variables on each scale were examined to assess the factorability of the data matrices, identified through the magnitude and significance of the correlations (Tabachnick and Fidell 1989, Norusis 1992, Oppenheim 1992, Bryman and Cramer 1997). It is recommended that the data matrix be examined for the proportion of correlations over 0.3 in absolute value; at least some correlations over 0.3 in absolute value are required for PCA & AFA to be suitable (Tabachnick and Fidell 1996). Furthermore, numerous pairs of significant (measured at 5% significance or less) correlations are also necessary (Tabachnick and Fidell 1996).

In addition, two tests were also conducted to assess the appropriateness of PCA with each of the six hypothesised scales (Tabachnick and Fidell 1989, Norusis 1992):

- Kaiser’s (1970, 1974) measure of sampling adequacy - Values of 0.6 and above are required for good PCA & AFA (Tabachnick and Fidell 1996).
- Bartlett’s (1954) test of sphericity - tests the hypothesis that the correlations in the matrix are 0 - a significant test indicates that PCA & AFA are suitable as the correlations in the matrix are not 0 (Tabachnick and Fidell 1996).
In terms of correlations:

- 45.76% are over 0.3 in absolute value
- 84.75% are significant

The two tests for adequacy of AFA were conducted:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.74694
- Bartlett Test of Sphericity = 419.37842, Significance = 0.00000

Therefore, AFA is deemed appropriate for the data set.
INSTRUMENTALITY OF WBL

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In terms of correlations:

- 53.33% are over 0.3 in absolute value
- 73.33% are significant

The two tests for adequacy of AFA were conducted:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.66846
- Bartlett Test of Sphericity = 122.44424, Significance = 0.00000

Therefore, AFA is deemed appropriate for the data set.
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In terms of correlations:

- 69.17% are over 0.3 in absolute value
- 90% are significant

The two tests for adequacy of AFA were conducted:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.79390
- Bartlett Test of Sphericity = 891.81264, Significance = 0.00000

Therefore, AFA is deemed appropriate for the data set.
### WBL Goal Setting Processes

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In terms of correlations:

- 53.85% are over 0.3 in absolute value.
- 81.48% are significant.

The two tests of adequacy of AFA were conducted:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.77007
- Bartlett Test of Sphericity = 1716.1102, Significance = 0.00000

Therefore, AFA is deemed to be appropriate for the data set.
In terms of correlations:

- 48.48% are over 0.3 in absolute value.
- 62.12% are significant.

The two tests of adequacy of AFA were conducted:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.82556
- Bartlett Test of Sphericity = 308.19263, Significance = 0.00000

Therefore, AFA is deemed appropriate for the data set.
APPENDIX 10

KEY TO SES GROUPS
The following groupings were utilised in the categorisation of Socio-Economic Groups.

Socio-Economic Groupings

A = Upper M/C, Higher Managerial/Administrative/Professional
B = M/C, intermediate posts
C1 = Lower M/C, supervisory, clerical or junior management positions
C2 = Skilled W/C, skilled manual workers
D = W/C, semi and unskilled manual workers
E = Those at lowest level of subsistence, state pensions, casual and lower grade earners.

The following tables were used to determine the power of the hierarchical multiple regression analysis used in stage three of the project.

Sample size required to detect $r$ (effect size) by t test (power of test) at $\alpha=0.05$ (two-tailed).

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</table>

Source:

Appendix 11

Minimum $R^2$ that can be found statistically significant with a power of 0.80 for varying numbers of independent variables and sample sizes.

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<th>Sample size</th>
<th>No. of Independent Variables</th>
<th>Significance Level ($\alpha$) =0.01</th>
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Source:

APPENDIX 12

MULTIPLE REGRESSION DATA CHECKS
A number of data checks were conducted before the final multiple regression analysis was carried out.

**DATA ENTRY ERRORS AND MISSING DATA**

Minor data entry errors were located and rectified. The data was then checked for missing values, and no variable was found to have more than 17% of the data values missing. All variables with missing data related to the personal profile section of the questionnaire as all other values were summated scores. Individual items for each questionnaire scale having been previously dealt with in the AFA data checks (appendix 9). Furthermore, some missing values in relation to personal data is to be expected in any questionnaire survey. The majority (72.55% - 37 out of 51 missing) of missing data values were scattered randomly throughout the data matrix suggesting that the missing values will pose no serious problems in the data analysis (Tabachnick and Fidell 1989). These missing values were estimated using the mean value for each variable and included in the final analysis, as described by Tabachnick and Fidell (1996).

However, two cases (91 and 92) were identified that together accounted for 27.45% of the missing values (14 out of 51 missing). These two cases were both from organisation two and did not complete questions in the personal profile section relating to gender, age, marital status, age leaving education, academic qualifications, occupational status and responsibility for other's development. This lack of response to these questions may be attributable to apprehension of possible identification by officials within their organisation, despite assurances of confidentiality and anonymity. In terms of scale scores from the questionnaire these two cases are quite different from one another, particularly in relation to perception of the organisation, goal setting and evaluation. Case 92 is markedly more positive than case 91 in all of these scales. Deletion of these two cases is warranted as in the multiple regression analysis 7 of the IVs for each case will either be missing or would need to be estimated.

**OUTLIERS**

The data matrix was also checked for univariate and multivariate outliers.
UNIVARIATE OUTLIERS

Dichotomous variables were examined for items that presented very uneven splits between response options, where extreme cases are defined as having a 90:10 percentage split (Tabachnick and Fidell 1996). No variables in the analysis presented such extreme splits, however the most uneven variables were:

- Vocational qualifications presenting a 74:26 percentage split in favour of no vocational qualifications.
- Professional qualifications presenting a 68:32 percentage split in favour of no professional qualifications.

Given the large proportion of participants who did not possess vocational and/or professional qualifications it was decided that these two variables could be omitted from the overall analysis. It was decided that level of prior learning would be better represented by the inclusion of 'academic qualifications' rather than including variables that essentially reflected lack of qualifications and would overall reduce the power of the regression (Jaccard et al 1990).

The remaining data matrix was screened for univariate outliers via examination of the Z-scores for each questionnaire item. Outliers were defined as any Z-score above or below ± 3.00, as recommended (Tabachnick and Fidell 1989). Only one univariate outlier was indicted defined as case 59 (Z=-3.21420, 'instrumentality informal learning'). The magnitude of the Z-score for this case was within acceptable limits for retention in the study, especially as they are only an outlier on one variable (Tabachnick and Fidell 1996).

MULTIVARIATE OUTLIERS

The data matrix was screened for multivariate outliers using the multiple regression function, where case number was used as a dummy dependent variable and all items in the questionnaire were the independent variable, as recommended (Tabachnick and Fidell 1989, Norusis 1992b). Multivariate outliers are defined as those cases with standardised residual values greater than 3 in absolute value (Norusis 1992b). The analysis revealed that there were no multivariate outliers, this supports the case for retention of case 59, as this respondent was not indicated as a multivariate outlier (Tabachnick and Fidell 1996).

MULTICOLLINEARITY AND SINGULARITY

Multicollinearity occurs when variables are too highly correlated, it is recommended that for techniques such as multiple regression correlations between IVs of 0.7 or above are undesirable on logical grounds, i.e. high correlations indicate that the variables may be so similar that one variable is redundant (Tabachnick and Fidell 1996). Indeed, the previous factor analysis stage served as a vehicle to identify well-correlated items that together formed a smaller set of new
variables on each main factor, and hence guarded against some of the problems of multicollinearity (Kleinbaum et al 1998). However, this would not impact on between factor multicollinearity.

The correlation matrix between IVs and DV was examined for high correlations between IVs and DV (desirable) and high correlations between IVs and IVs (undesirable), as recommended (Norusis 1992b, Tabachnick and Fidell 1996). Where highly correlated IVs exist the researcher can consider various strategies, including (Berry and Feldman 1985, Hair et al 1998):

- Deletion of one variable, although specification error (error in predicting the DV caused by exclusion of important IVs) should be avoided (Hair et al 1998).

- Constructing a composite score, although this should only be considered if the variables could theoretically be viewed as part of the same underlying concept.

Only two bivariate correlation values of 80.7 were found between the IVs:

- Organisation understands needs and WBL support \( (r=0.7017) \), problems with multicollinearity were also indicated in post-analysis data checks recommended by Belsley et al (1980). It seems reasonable that these variables are part of the same underlying support factor - where organisational understands needs represents an emotional component of support, i.e. the perceptions that somebody understands. Thus these two variables were subject to AFA to determine if items on these factors did form a single factor. Results of this analysis are presented in chapter 6.

- Academic Qualifications and Age leaving education \( (r=0.7891) \) - it seems reasonable that the age of leaving formal education should be highly correlated to level of formal academic qualifications. Given the degree of the relationship it was decided to retain only ‘academic qualifications’ enabling direct assessment of the influence of prior qualifications in the overall model avoiding problems of multicollinearity and potential specification error.

The resultant pattern of correlations following the above modifications indicated that it would be appropriate to continue with multiple regression (Tabachnick and Fidell 1996, Hair et al 1998). However, model factors were expected to be related and suppressor, indirect and moderating variables are anticipated by the model. Indeed, Hierarchical Multiple Regression is recommended as the only method of regression to be used with correlated IVs (Cohen and Cohen 1983). Furthermore, collinearity diagnostics for identification of high multivariate correlations are produced by SPSS at the end of the regression analysis (Norusis 1992b) and are discussed in section 15.6.

**NORMALITY**

Normality of the 12 factor scores to be included in the multiple regression analysis was examined through the recommended shape descriptors - skewness and kurtosis statistics (Tabachnick and
When the assumption of normality is violated transformation of variables should be considered, however, transformation causes problems with interpretation that require careful consideration before transformation is undertaken (Tabachnick and Fidell 1996, Hair et al 1998).

Of the 13 factor scores included in the analysis, in terms of skewness, 100% of scores were between ±1.0, in terms of kurtosis scores 100% were between ±1.0 (see table below). The significance of these statistics was tested through calculation of the corresponding Z-value, where:

$$Z_{kurt} = \frac{\text{kurtosis statistic}}{\text{standard error of kurtosis}}$$

$$Z_{skew} = \frac{\text{skewness statistic}}{\text{standard error of skewness}}$$

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<th>Z-value</th>
<th>Skewness Statistic</th>
<th>Z-value</th>
<th>Transformation</th>
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* * * approaching significance at 0.01
** significant at 0.01

Skewness and Kurtosis scores for variables in multiple regression

The significance of each of these scores was assessed through comparison of the relevant Z-score with ±2.58 (level of significance = 1%), as recommended (Tabachnick and Fidell 1996, Hair et al 1998). One variable, instrumentality of formal learning (Z-skew= -3.64), was found to have significant skewness/kurtosis scores. Instrumentality of informal learning was found to approach significance (Z-skew= -2.52) at the 1% level of significance. The histograms with normal curve and normal probability plots were examined for these two variables (see figures below).
This histogram indicates that the instrumentality of formal learning factor only slightly departs from normality, the negative skew indicating bias towards slightly higher scores on this scale (increasingly positive perceptions of instrumentality of formal learning).
Similarly, this histogram indicates that the **Instrumentality of informal learning** factor only deviates from normality slightly; the negative skew again indicating that there is a bias towards slightly higher scores (increasingly positive perceptions of instrumentality of informal learning).

Given that the deviation from normality for these two factors is not too extreme, no transformation will be conducted and the original values will be included in the multiple regression analysis as ease of interpretation will be maintained, which is the desirable option when departures from normality are not too marked (Hair et al 1998). Furthermore, it has been suggested that multiple regression analysis is quite robust against violations of normality and some deviations can therefore be tolerated (Berry and Feldman 1985). Indeed, when an analysis is robust against
violations of normality, retention of the original variable is desirable over transformation (Tabachnick and Fidell 1996).

LINEARITY, HOMOSCEDASTICITY AND OUTLIERS IN THE SOLUTION

Although multiple regression assumes linearity in the relationships between the IVs and the DV, failure of linearity does not invalidate the use of such an analysis but the resultant solution will be weakened by the presence of non-linear relationships (Tabachnick and Fidell 1996). Similarly, homoscedasticity (assumption that standard deviations of errors of prediction are approximately equal for all predicted DV scores) is assumed but not vital to multiple regression analysis, although heteroscedasticity weakens the solution. Where the assumptions of linearity and homoscedasticity are violated the option of variable transformation can be considered and the analysis re-run (Tabachnick and Fidell 1996, Hair et al 1998). Outliers in the solution represent cases that the resultant regression model does not explain well. It is suggested that any outliers are particularly useful in identifying situations that cannot be predicted by the current solution and may provide clues for further exploration (Tabachnick and Fidell 1996).

Linearity, homoscedasticity and the presence of outliers were assessed through examination of residual plots (scatterplot between standardised predicted DV scores and standardised errors of prediction) after the multiple regression analysis has been conducted (Norusis 1992b, Tabachnick and Fidell 1996, Hair et al 1998). The resultant scatterplot can be seen in the figure below.

The shape of the scatterplot is of paramount interest, as shown by the resultant scatterplot for this analysis when all assumptions are met the points form a rough rectangular shape with a concentration of scores along the centre (Tabachnick and Fidell 1996), a slight oval shape is typical in smaller samples, i.e. a swell around the middle of the points is to be expected (Berry and Feldman 1985). In particular, the roughly rectangular shape of the scatterplot indicates that the
assumption of linearity between predicted DV values and errors of prediction is supported (Tabachnick and Fidell 1996). Furthermore, the assumption of homoscedasticity is generally supported by the roughly equal horizontal width of the scatterplot (Tabachnick and Fidell 1996).

The scatterplot also indicates potential outliers (Tabachnick and Fidell 1986). It is important to identify cases that are influential in the analysis, including outliers, although influential cases are not necessarily outliers (Norusis 1992b, Hair et al 1998). The leverage (a measure of influence of cases on DV prediction) for each case was calculated and explored for values exceeding 2*number of IVs / N (2*20/96 = 0.4166), as recommended by Norusis (1992b). No values were found to exceed this threshold value (range=0.02517 to 0.39491). Thus, although the scatterplot indicates potential outliers, these were not found to be influential in the analysis and will be retained. In addition, in the analysis of residuals, if outliers are fewer than 1% or 2% of the overall N and are not very extreme, then they are probably better left in the analysis (Cohen and Cohen 1983).

The collinearity diagnostics provided after running the regression analysis (including the new WBL support variable, which is a composite score of the original organisation understands employee needs and WBL support variables) were examined to identify the degree of multicollinearity, high degrees of which may adversely affect the final solution (Norusis 1992b, Tabachnick and Fidell 1996, Hair et al 1998). The two-stage method suggested by Hair et al (1998) was adopted for investigation of multicollinearity.

- Firstly, condition indexes (degree of collinearity) over 30 (Kleinbaum et al 1998, Tabachnick and Fidell 1996, Hair et al 1998) were identified, where C1<30 indicates moderate to severe collinearity (Kleinbaum et al 1998).

- Secondly, the regression coefficient variance-decomposition matrix (showing the proportion of variance for each regression coefficient attributable to each condition index - giving an indication of inter-variable dependency) was explored. Multicollinearity is a problem when a condition index accounts for a high proportion of the variance in two or more coefficients. The level of variance threshold is somewhat arbitrary and there is disagreement among authors, suggestions of 0.5 (Tabachnick and Fidell 1996) up to 0.9 (Hair et al 1998) having been made. Kleinbaum et al (1998) and Belsley et al (1980) suggest that two or more proportionios of 0.5 indicate potential problems, whereas levels close to 0.9 indicate a real concern for the researcher.

- In addition, the results from this process were compared with measures of tolerance and variance inflation factor (VIF). However, it is suggested that the conditioning indexes and variance-decomposition direct the search for multicollinearity problems as these provide greater diagnostic power than tolerance or VIF (Belsey et al 1980, Hair et al 1998).
### Appendix 12

<table>
<thead>
<tr>
<th>Number</th>
<th>Cond. Index</th>
<th>Variance Const.</th>
<th>Work development outcomes</th>
<th>Instrumentality of formal learning</th>
<th>Instrumentality of informal learning</th>
<th>Goal Setting</th>
<th>Goal Acceptance</th>
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<tr>
<td>16</td>
<td>30.368</td>
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<td>17</td>
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<td>0.31970</td>
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<td>Tolerance</td>
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<td>0.639196</td>
<td>0.324426</td>
<td>0.675956</td>
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<td>VIF</td>
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<td>1.391</td>
<td>1.564</td>
<td>3.082</td>
<td>1.479</td>
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</tr>
</tbody>
</table>

**Conditioning Indexes, variance-decomposition, tolerance and VIF for main effects multiple regression model**

Five condition indexes were identified as exceeding the threshold of 30 and are presented in table above with the variance-decomposition matrix (only variables with variances over 0.3 are represented), tolerance and VIF values. For each conditioning index, the variance explained did not exceed 0.5 for two or more variables at one time. Thus multi-collinearity is not indicated as a problem. Furthermore, it should be noted that severe problems associated with multicollinearity are indicated when none of the regression coefficients are significant but the overall $R^2$ is (Berry and Feldman 1985), in this analysis several of the regression coefficients were found to be significant.

An additional assumption of multiple regression is that errors of prediction are independent of one another (Tabachnick and Fidell 1996). The Durbin-Watson statistic was also calculated, which tests for correlation of residuals, values closer to 2 indicating no correlation (Norusis 1992b). As the resultant test-statistic (Durbin-Watson Test = 2.36031) was close to 2, this indicates that residuals in this analysis are not correlated (independence of errors) and that this assumption is adequately met.